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OWING to the great scarcity of coal in the West, many wood-burning stoves have temporarily replaced coal-burners.

MR. R. H. STRETCH, M.E., who made an elaborate report on the property of the Canada Consolidated Gold Mining Company, has been for some months past engaged in making an exhaustive survey and examination of the lower levels of the Comstock lode, for Mr. CLARENCE KING, Director-General of the Geological Survey of the United States. The Virginia City *Enterprise* says :

"Mr. STRETCH is familiar with all the upper sections of the lode, having thoroughly examined and carefully mapped them for Mr. KING'S former work published by the United States government. He also made frequent examinations of our mines at the time when he held the office of State Mineralogist of Nevada. In his present work, Mr. STRETCH will be able to show some curious changes that have taken place in the situation of rock formations with depth ; in this he will be greatly assisted by sections carefully prepared for microscopical slides. From these, beautiful and instructive colored plates will be prepared."

WE publish elsewhere an article, embodying the means of arriving at an adjustment of disputes between colliery owners and miners, by a sliding-scale of wages based on a standard of wages and the selling price of coal. This method is now in operation in the Leeds District, England. The terms of the memorandum of agreement appear to be carefully drawn up, and equity seems to be the basis on which it has been entered into as well as the end desired. While the memorandum has the great advantage of brevity, the spirit and legal aspect of the document are retained. It is to be regretted that such a means of settling disputes is not more generally adopted. That it is not, is apparent from our recent English exchanges, and from later news by cable, by which it is seen that the disposition of labor to strike against capital on the slightest pretext is by no means at an end. The instigators of such ill-advised and disastrous contentions lose nothing, whether capital or labor ultimately prevail. The recent Employers' Liability Act, among other causes, complicated with questions about wages, etc., appears to have in some instances furnished occasion for a rupture, and we read of 50,000 miners on strike in the North ; an increased wages agitation among the cotton operatives at Oldham, with a strike of 15,000 men imminent ; and a strike of 3000 men at the Sunderland engineering-works. In the Lancaster coal-fields, we are told the strike is over in some districts, and elsewhere it is rapidly coming to an end. The strikes themselves, together with the extreme severity of the weather in Europe, which rapidly reduced the stocks of coal, and for a time abnormally enhanced prices, have no doubt been the means of temporarily staving off the dreaded conflict.

But a strike in the *Times* office is an event which has no connection with coal. Mr. WALTER, one of the proprietors, in reply to a deputation who waited upon that gentleman, for the purpose of laying before him their grievances, said that "he must reserve to himself the right of spending his money as he pleased, without justifying himself to his employés ;" and he stigmatized the complaint in connection with the composing-machines as "an organized resistance to mechanical and scientific progress."

By cable from London, February 7th, we are advised that a mass-meeting of miners at Pendlebury, Lancashire, decided to strike for an advance of 12½ per cent in wages, fifteen thousand miners being affected by this decision. Nine thousand miners are on strike in various other districts ; and advices from London, dated February 8th, state that one thousand miners struck at Ruabon, Wales, for 25 per cent advance in wages. Later, several miners in this district resumed work at an advance of 7½ per cent in wages.

PETER COOPER.

This is the ninetieth anniversary of PETER COOPER'S birthday ; and we record with sincere rejoicing the fact that it finds him hale and hearty, his faculties unimpaired, his interest in public affairs still keen, his unwearied benevolence as active as ever. To attain so great an age is rare ; to reach it with full capacity still of doing and enjoying, rarer still ; to stand upon its summit and look back over such a noble and unselfish life, rarest of all. We establish no dangerous precedent in bestowing upon PETER COOPER, while he yet lives among us, the praise for which most men wait until they die. We may safely promise (without much fear, alas ! of being called to the performance of the pledge) that whoever will begin so early, and continue so long, the generous service of his fellow-men, shall receive the meed of their unstinted eulogy. May it be long before, in the case of PETER COOPER, eulogy becomes epitaph !

Wisely he wrote, whose vision free
The inmost truth descried :
"All other things shall pass ; but three—
Faith, hope, and love—abide."

Nor only in the eternal sphere
Shines forth the promise sure ;
Amid all toil and passion here
Faith, hope, and love endure.

No darkling doubts, no clamoring creeds
Our human souls can move
To scorn the life that speaks in deeds
Of faith and hope and love.

Faith, that beholds the end complete,
And hope, that lights the way,
And love, that with unshrinking feet
Pursues it, day by day.

O thou, whose years so lightly lie
Upon thy youthful heart ;
Whom death has passed in reverence by,
Nor called thee to depart !

When thou shalt go, no wondrous change
Thy spirit will betide ;
To thee that world can not be strange
Where these three things abide ! *

THE INTERIOR MOVEMENTS OF SOLIDS.

In the *Jahrbuch der k. k. geolog. Reichsanstalt*, Vol. XXX, 1880, p. 543, there is an interesting essay by Dr. E. REYER, entitled *Die Bewegung im Festen*, to which we call attention, partly on account of its suggestive contents, and still more because it is accompanied by an extended bibliography of the subject, which constitutes both an evidence of the industry of the author and a valuable guide to the reader who may desire to make further inquiry for himself.

Dr. REYER mentions first the molecular changes directly wrought by variations in temperature or by mechanical force. Under this head, he cites the gradual crystallization of amorphous sugar, silica, and sulphur ; the alteration of aragonite to calcite ; the crystallization of iron and gun-metal by continued jarring, and of iron by repeated heating ; the change in the expansion-coefficient of measuring-rods through long land-transportation ; the disintegration of zinc by cold ; the change of structure in telegraph-wire by long use ; the transformation of mercury iodide by a mere scratch, and that of nickel sulphate by sunshine, etc.

More complicated are those changes which involve an increase, diminution, replacement, or chemical rearrangement of material. Such are the processes of metamorphism and pseudomorphism, and the processes of

growth. Of the latter, there are three classes, corresponding, as one might fancifully say, to the three geometrical conceptions of a volume, a surface, and a point. In the first case, the solid body grows by the deposition of new matter in all its pores. The growth of organisms, the swelling of clay when moistened, and the change of anhydrite into gypsum are examples. In the second case, the new substance is deposited upon surfaces. An example is the ice which forms under pebbles in winter, and lifts them from the ground. Conglomerates and fissure-veins exhibit the same kind of deposition, which is doubtless often attended with an amount of pressure from the solidifying new substance, sufficient to move adjacent pieces of the older solid. In the third case, the deposition takes place around a nucleus, giving rise to concretionary structure. All these cases are, in fact, but varieties of concretion, and hence combinations and transitions of type are common.

The permanent change of form is another phenomenon of interior movement in solids, as familiar as it is important. Sealing-wax, though brittle, can be readily bent or stretched by a steady force. The working of metals, hot or cold, of damp wood or warm horn, are well-known instances; and the difference in effect between a uniform and prolonged strain or pressure and a sudden or brief one, is notorious. Small forces acting through long periods effect wonders in this direction. The plasticity of ice, and even of glass; the phenomena of hammering and welding metals, etc., give additional proof that neither rigidity nor elasticity is an unalterable quality of any substance.

Dr. RYER next proceeds to consider the geological significance of facts of this character. The proofs of the plasticity of rocks are abundant. The crystals and fossil remains in some rocks are often striking and distorted. The galleries in mines are often gradually closed by the "swelling" of the adjacent rock; strata are folded after a few years by the mere effect of excavations made in mining beneath them.

The behavior of anhydrite is an instructive phenomenon. This natural anhydrous gypsum is affected by water like the artificial plaster of Paris, being transformed, as CHARPENTIER first observed, into gypsum, and expanding strongly in the process. This expansion, in the case of anhydrite in mineral deposits gypsumized by percolating water, has often moved and fractured adjacent rocks, and forced the gypsum into the fissures, producing the appearances which led HOFFMANN to consider it a recent eruptive rock.

But limestone, slate, coal, graphite, and other minerals occur in forms of similar character, and yet we can often maintain with certainty that the plastic transformations which they have undergone were not conditioned, as is the case with anhydrite, by chemical reactions. In all these instances, however, the presence of moisture throughout the mass appears to be an important factor.

DELIUS, SAUSSURE, ROZES, MCCULLOCH, and many others point out that limestone, sandstone, opal, chalcedony, beryl, asbestos, tremolite, etc., are soft in their moist underground condition, and grow hard upon exposure, through loss of water. Even granite is said to be much more easily cut while it contains its natural moisture, than after it has become thoroughly dried. A related phenomenon is the superior solubility of a salt which has been kept moist, as compared with its resistance to solution after drying.

MCCULLOCH was perhaps the first to apply these principles to the explanation of the forms of rocks. Starting with the relative softness of rocks containing natural moisture, he contended that this fact would account for the folding of strata without fracture, pointing out at the same time that the capacity of submitting to motion without rupture is not uniform in all the members of a rock-series. Thus in plicated slates are often found intercolated layers of quartz, which could not keep pace with the bending of the adjacent material, and therefore broke asunder and were crushed. DE LA BECHE also discussed the bending of stratified rocks, and concluded that at some period softening agencies (such as water and heat) had affected such masses throughout. VOLGER, in his *Erde und Ewigkeit* and other writings, published in 1857 and 1858, went urther, laying special weight upon the force exerted by the growth of crystals, or the expansion of mineral masses by the "*intussusception*" of new material and the consequent rearrangement of molecules. His theory of the folding of strata is illustrated by the familiar example of the wrinkling of a sheet of paper when a moist cloth is laid upon it. The strata become wrinkled, as it were, because, prevented by superincumbent weight from a simple and direct increase of thickness, they expand laterally. It is manifestly easy to attribute to such a process too great a range in nature. If a layer of rock can not lift the overlying rocks by direct expansion vertically, it is hard to see how it could do so by *puckering*—the original force being the same.

Among recent investigations of this subject, that of HEIM (*Gebirgsbildung*, 1878) is noteworthy. He combats the opinion, formerly common, that the folding of strata took place while they were in a pasty condition, showing, for instance, that the Alps were folded after many of the strata not only had become solid rock, but as such had been reduced to sand and gravel. He also points out that, where erosions have laid bare the cross-sections of mountain ranges, the strata which at the time of folding were deep beneath the surface are shown to have suffered change of form without rupture, while in those which lay near the surface rupture or crushing accompanied the change of form and position. Hence he argues that the rocks are plastic under great pressure. It may be questioned, whether this relation between depth and apparent plasticity is established. We suspect that in many cases the phenomena might be more simply explained by reference to the radial distance of the respective layers of rock from the center of curvature or upheaval. Thus in the formation of an anticlinal, the upper strata would suffer more transformation and dislocation in a given time than the lower ones, and might therefore be expected, though equally "plastic," to exhibit more rupture.

But PFAFF (*Allgemeine Geologie*) has shown that dry rocks, even under the pressure of several thousand atmospheres, do not become plastic, and remarks (in his *Gebirgsbildung*, 1880) that the high pressure as such tends rather to diminish than to augment the mobility of the molecules.

At this point Dr. REYER comes forward with his hypothesis of the agency of the moisture in the rocks. We translate literally his statement of the proposition:

"We start from the consideration of the plasticity of ice. This substance melts under pressure, even at a temperature far below its freezing-point. If the pressure be diminished, the super-cooled melted substance solidifies. If then a mass of ice be subject to unequal pressure, there will be here and there, according to the pressure, a melting in its interior. The particles will, however, accommodate themselves to the pressure, and the respective places will be so far relieved as to permit the regelation of the water. But the relatively stronger pressure will now be felt at other points, and the same process will then take place; and so on, until the whole mass has assumed a form corresponding to the dominant pressure. The freezing at one point being always counterbalanced by the thawing at another, the sum of energy remains the same, and the interior equilibrium is maintained throughout the transformation.

"The analogy holds for the transformation of a solid mass penetrated with moisture. Under increased pressure there is increased solubility. If, therefore, a mass pervaded with moisture be exposed to the action of an exterior force, an increased solubility must exist at the points most strongly affected. The structure is rendered more porous at those points, and the mass accommodates itself to the pressure. As soon as this has taken place, and the pressure has been relieved at the points referred to, it acts to promote solution at neighboring points; but at the points relieved just as much crystallizes as is dissolved at the points under extra pressure."

It will be seen that this hypothesis rests partly upon a doubtful analogy, and can scarcely be said to have a definite experimental foundation. Yet experimental tests would not be difficult. We have such on record with regard to the bending of rocks—made, indeed, without special reference to the question of moisture, but under circumstances which render it probable that the rocks were dry. It ought to be easy to observe on a small scale the process of alternate solution and crystallization, if it really takes place on the large scale as Dr. REYER suggests. When we reflect, however, on the frequent folding of sandstones, clay-slates, and coal-seams, without such signs of metamorphosis as this process would produce, we are led to suspect that it is not universally applicable or necessary as an explanation of the facts.

It may be questioned, moreover, whether the relations of pressure and solubility, here postulated, actually exist. Water under pressure may have increased solvent power; but is it certain that the increased pressure due to superincumbent strata is shared by the water in the pores and passages of rocks in the same proportion as by the rocks themselves? And if the substance to be dissolved is subjected to a greater increase of pressure than the solvent, is solution facilitated?

Deep mining operations seem to indicate that the high temperature of the earth's interior is a more important element of the possible increase both of pressure and of solvent power in the water than is the weight of the rocks through which water circulates or in which it abides.

Our deepest mines show also that, at a point where the gravity-pressure would be some three hundred atmospheres, the hypothesis of Dr. REYER is not yet exemplified. For we have at that depth fissures, cavities, and freely-flowing waters; whereas, according to him,

"The earth must be, at great depths, a *continuous* solid mass, without interruption. Great cavities, such as play a part in many geological hypotheses, are untenable, because the adjacent masses are plastic. * * * Open fissures can, for the same reasons, not exist at great depth."

We should like to know at what depth this hypothesis begins to be valid, and why no proofs of it are found so far, at the very respectable depths attained by shafts and tunnels. At the same time, we do not doubt that, while it may not be as universally important as its author imagines, it contains a suggestion of novelty and value.

Dr. REYER applies his hypothesis to the question of earthquakes, etc., but we will quote only, in closing, his final remark, which is true for any hypothesis involving what we may call the relative fluidity of solids, however explained:

"If the earth's rotation suffers a change in the course of time, the flattening at the poles must gradually accommodate itself to a certain degree. * * * This flattening, as observed to-day, certainly therefore does not represent the rotation at the time of cooling; on the contrary, in all probability a change of the form of the globe has taken place, in recent geological periods, in accordance with cosmical relations."

This seems reasonable. If it is not true, then the present revolution of the earth must be producing an unequal tension, due to an unappropriate shape—of which there is no sign.

REVIEW OF THE COAL TRADE OF THE UNITED STATES FOR 1880.

(*Concluded from page* 91.)

During the winter of 1879–80, the bituminous trade suffered in sympathy with anthracite. The winter was open and supplies very liberal. Before the middle of January, however, there were indications of a coming strike among the miners, and $3.25, free on board, was asked at Baltimore for Cumberland coal. It was not, however, until the latter part of February, that the strike actually took place. The Cumberland companies acceded to the demands with but very little opposition. The Clearfield companies determined to oppose the advance in wages. The result was, that prices at Baltimore, for a time, advanced $1 a ton, and in New York fifty cents. Shortly afterward, the Baltimore & Ohio Railroad and Pennsylvania railroads advanced freights, to tide-water, fifty cents per ton. The Chesapeake & Ohio Canal advanced its tolls eleven cents, while freights on the canal were considerably higher than in 1879, thereby increasing the cost of placing Cumberland coal, either at Georgetown or Baltimore, from seventy to eighty-five cents per ton. The Clearfield strike continued for about three months, although it began to break very much earlier, owing to the introduction of new labor under the protection of the police. In April, there was a brief strike among the employés of the Cumberland & Pennsylvania Railroad. At the same time, the boatmen on the Chesapeake & Ohio Canal were asking such high prices as to prevent much business being done by that route. At this time, there was an active demand, and important sales were reported on the basis of $3.75 at Georgetown and $4 at Baltimore. Before the end of the month, the shippers from the Cumberland region had acceded to the exorbitant demands of the boatmen as they had done to the miners and to almost any one who had a desire to make a demand upon them. Early in June, there were sales of Cumberland coal at prices which indicated that the Baltimore & Ohio was again giving secret drawbacks to some of its shippers. It was very evident, at all events, that some of the companies were also making low contracts for delivery, with the expectation of getting reduced rates of freight, which they did not afterward realize. In this month, the Maryland Coal Company shipped some coal from Philadelphia, there being at that time some advantage in shipping to some points from that port. The first half of the year closed with a light demand and weak prices.

In the early portion of the year, the steamship companies were bringing a large amount of freight to this country and carrying a much smaller quantity of coal than usual. The result was, that they took very much more coal than they had been accustomed to. By July, however, the freights this way had fallen off, and the steamship companies were taking very much less American coal. In July, there were several contracts made in the East for the delivery of Clearfield coal to Eastern railroads, which had hitherto been supplied entirely by Cumberland coal. One of these contracts was for 15,000 tons to the Boston & Maine road, and was said to be at $4.75 at Boston. In August, there was a strike on the Chesapeake & Ohio Canal. There was, at the same time, an improving business, although no improvement in prices. The boatmen's strike terminated before the end of the month. In September, there was a very liberal production and a good demand. Prices, however, did not strengthen. By the end of the month, there was a scarcity of vessels all around, and a scarcity of cars on the Pennsylvania Railroad. The scarcity of cars with the Clearfield shippers continued to be a feature in October. In this month, there was a brief strike on the Cumberland & Pennsylvania Railroad, which checked business from the Cumberland District. Prices were a little higher than in September. The scarcity of cars continued on the Pennsylvania road, through, in fact, the remainder of the year.

During the latter part of November, the Chesapeake & Ohio Canal became closed with ice; whereas, during the previous season, it had kept open, and there had been shipments made as late as January. This placed the Cumberland region at an early day upon a winter business, with the result of somewhat strengthening the price of Clearfield. During December, steamers were making very long passages and required a good bit of coal, making, for a time, quite an active demand for this class of coal. The year ended with a very fair demand for consumption, and prospects of a remarkably good year in 1881.

The George's Creek & Cumberland Railroad met with all sorts of opposition from the Baltimore & Ohio Railroad during the year, and is still in a position where it is of no help to the oppressed producers of coal in the Cumberland field. It is encouraging to note, however, that the George's Creek & Cumberland road has been successful in all of its efforts, and that ultimately the intentions of the promoters of this enterprise will be fully carried out. The only delay will be that of the law, and this can hardly prevent the completion of the road later than the opening of navigation. When this is done, the Cumberland region will attain the position it is entitled to, and some of the mining companies that have been mining only coal enough to keep up an existence will probably assume considerable importance in the eyes of the public.

The shipments of Cumberland coal from the mines during 1880 were:

NAME OF COMPANY OR MINE.	1880.					COMPARED WITH 1879.	
	To B.& O. RR.	To C.& O. Canal.	To Penna. RR.	Local.	Total.	Increase.	Decrea'e.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Consolidati'n Coal Co.	372,482	166,402	673	28,687	568,244	84,552	.....
New Central Coal Co.	131,793	64,783	153,079	2,800	352,455	18,195	.....
George's Creek Coal and Iron Co.	197,290	38,309	.....	836	236,435	106,503	.....
Borden Mining Co.	5,624	101,622	43,298	8,830	159,374	1,784	.....
Americ'n Coal Co.	37,490	87,350	53	541	125,434	26,567	.....
Maryland Coal Co.	17,356	94,279	1,756	612	114,003	44,967	.....
Franklin Coal Co.	102,821	.....	.....	.....	102,821	538	.....
Hamp. & Balto. Coal Co.	72,553	11,706	14,478	295	99,032	.....	7,552
Potomac Coal Co.	77,431	.....	.....	263	77,694	1,739	.....
Atlantic & George's Creek C. C. Co.	62,792	.....	.....	3,050	65,842	.....	5,784
Davis & Bro. (W. Va. Mines)	54,843	.....	.....	.....	54,843	54,843	.....
George's Creek Mining Co.	50,538	.....	.....	.....	50,538	50,538	.....
Blaen Avon Coal Co.	4,513	38,674	.....	1,763	45,020	4,283	.....
Swanton Mining Co.	41,643	.....	98	383	42,124	545	.....
Cumberland Coal and Iron Co.	.....	.....	25	22,915	22,940	22,940	.....
Piedmont Coal and Iron Co.	3,094	.....	.....	.....	.....	.....	.....
Piedmont (Empire Mine*)	11,497	.....	.....	.....	14,591	.....	1,621
Union Mining Co.	25	.....	.....	4,445	4,470	2,172	.....
North Bra'ch Coal Co.	233	.....	.....	.....	233	.....	367
Grant Coal and Iron Co.	67	.....	.....	.....	67	67	.....
	1,244,155	603,125	213,460	75,420	2,136,160	420,173	14,724
						14,724	
					Increase.	405,449	

*3546 Tons of this amount were shipped to C. & O. Canal, via B. & O. RR. to Cumberland.

The Cumberland & Pennsylvania Railroad has compiled tables giving aggregates as follows:

	Tons.
Shipped by Baltimore & Ohio Railroad	1,319,589
Shipped by Chesapeake & Ohio Canal	603,125
Shipped by Pennsylvania Railroad	213,446
	2,136,160

The total shipments of 1879 were but 1,730,709 tons, while in 1877 they were but 1,574,339 tons. In the history of the trade, there have been several larger years than 1880, namely, 1871, 1872, 1873, 1874, and 1875. The largest of these was 1873, which reached 2,674,101 tons. Shipments were first made in quantity from this district in 1842, when the total was 1708 tons. The aggregate of shipments to the end of 1880 was 37,637,068 tons, divided into shipments of 24,058,949 tons via Baltimore & Ohio Railroad, 12,396,816 tons by Chesapeake & Ohio Railroad, and 1,181,303 tons by Pennsylvania Railroad.

The Clearfield region was interrupted in its production by a strike which was not fully terminated short of three months, thereby greatly reducing the output. It is satisfactory, however, to be able to record that during 1880 the shipments aggregated 1,721,261 tons, as against 1,561,476 tons in 1879, giving an increase in 1880 of 159,785 tons.

Buffalo did a large business for the fiscal year ended June 30th, the receipts of anthracite amounting to 1,246,000 tons, and of bituminous 985,000 tons. The shipments were 930,000 tons of anthracite, and 240,000 tons of bituminous.

Cleveland, Ohio, is estimated to have done a business of 1,750,000 tons of coal in 1880, as against 1,500,000 tons in 1879. Sandusky, Ohio, did a business of over 120,000 tons, and at the end of the year had less than 1000 tons of coal in the hands of dealers. The completion of some new railroads, in conjunction with a revival of manufacturing, makes a large business for 1881 very probable. Toledo, Ohio, had a very good business, which, however, was limited by a scarcity of cars and vessels.

Chicago has become an important market and distributing point for coal, and promises to assume very much greater importance. The business of this city is in all kinds of coal and coke. In 1870, the receipts of coal at Chicago were but 887,474 tons, and the shipments 110,467 tons; while in 1880, the receipts were 2,674,758 tons, and the shipments 618,027, and the figures for the latter would have been very much larger were it not for a lack of transportation during the latter portion of the year, and strikes in the bituminous fields during the earlier portions. The price of anthracite coal ranged at $6@$8 during the year, and Briar Hill bituminous at $6.50@$9.

The following statement shows the ruling rates of freight on coal per ton, free, by sail vessels from Buffalo to Chicago during season of 1880:

March 27th	75	October 6th	50
April 8th	50	October 8th	60
April 21st	40	October 18th	50
May 26th	45	November 4th	70
May 31st	50	November 13th	90
June 19th	55	November 15th	100
July 1st	60		

The dates given are the days on which the changes were made. Rail

freights from Buffalo to Chicago are $1.35, which was the figure throughout the season.

There have been considerable developments made in the coal-fields of the States and territories of the far West, and a steady increase of production may be looked for.

The following table gives a comparison of the imports during the years 1879 and 1880 of coal at San Francisco :

	1879. Tons.	1880. Tons.	Increase. Tons.	Decrease. Tons.
Foreign :				
Australian	80,175	59,872	.....	20,303
English	36,588	66,660	30,072	.....
Vancouver	160,142	169,162	9,020	.....
Eastern :				
Anthracite	21,982	19,629	.....	2,353
Cumberland	1,777	20,916	19,139	.....
Domestic :				
Mount Diablo	134,435	158,723	24,288	.....
Coos Bay	45,969	35,415	.....	10,494
Bellingham Bay	.....	.....	.....	.....
Seattle	135,012	123,741	.....	11,271
Rocky Mountain	.....	.....	.....	.....
Ione, California	.....	.....	.....	.....
Carbondale, Cal.	1,229	.....	.....	1,229
Ounalaska	.....	.....	.....	.....
Carmel Bay	425	.....	.....	425
Tacoma	845	.....	.....	845
Totals	618,519	654,118	82,519	46,920
Increase in 1880	.....	35,599	.....	.....

It will be seen that there was a slight increase in the receipts of anthracite, and a very marked increase in the receipts of Cumberland. English coals show an increase of over 30,000 tons, and Vancouver of over 9000, while Australian shows a falling off of over 20,000 tons, and Coos Bay 10,000 and Seattle 11,000 tons. The San Francisco *Commercial Herald* says :

In the first half of the year 1880, low prices ruled, as was the case during all of the previous years, owing to liberal imports from the Australian colonies, England, etc. This enabled large consumers like the gas company, steamship and railroad companies, to make very favorable purchases abroad for shipment to this coast during the year, and also occasioned the owners of the Nanaimo, Wellington, and other British Columbia mines to enter into large monthly contracts for the supply of the companies referred to. The Seattle, W. T., mines pursued a like policy, making engagements for perhaps one half or two thirds of their yearly output, and at prices based upon freights to this market of say $2.75@$3 per ton. These contracts they have all striven to fulfill to the letter, but during the fall months freights for wheat to Europe advanced greatly, and some ships (wheat carriers) that were temporarily engaged in coal carrying suddenly drew out and accepted wheat charters. Then adverse winds and storms prevailed along the coast, so that the regular colliery vessels engaged in bringing coal to this city from the north made extraordinarily long passages, were wind-bound, and some were overtaken by disaster. The result was, that early in November stocks of coal for spot or family use were found to be running short. In fact, dealers were unable to supply their household customers, and in this time of distress a dealers' combination was followed, or rather the importers forced upon the retailers a schedule of prices and profits so arbitrary and unbusiness-like as to cripple the trade to a very considerable extent, forcing some parties into bankruptcy and causing others to retire from the business. At this juncture of affairs, the weather during November was unusually cold for us, and the household consumption larger than the average. Happily, December, though a wet month, was not so cold, and less coal was required, and prices eased off from the highest rates demanded. The policy of this great arbitrary advance in coal during the fall season was not generally approved of by all parties bringing coal from the north coast or from the California Mount Diablo mines. Nevertheless, they were all more or less benefited by the general rise. Imports of coal for the year show that our Pacific coast consumption is steadily increasing by the advance of our railroads into the far distant interior, Southern Pacific and other new roads. This fact of itself will stimulate the opening up of new coal-fields along the line of the Central and Union Pacific railroads, and which heretofore have only supplied a small portion of the road necessities. The California Mount Diablo mines furnish a good article of steam coals suited to local factories and inland water steamers, and this is supplied at a low price. The Bellingham Bay mines seem to have become exhausted, but the Seattle, Renton, and other Washington territory mines continue, with Coos Bay mines, to send us regular weekly supplies, as will be found detailed elsewhere. Of anthracite we have for two or three years past been carrying heavy stocks, and at low prices, below the cost of importation (other than that of Lehigh), simply because the consumptive demand of hard coals on this coast is comparatively very small, but the advance in bituminous caused a corresponding rise in anthracite and helped importers out nicely. Cumberland is for the most part imported here largely by the railroad or two or three leading dealers, and is used almost exclusively for smiths' use. For the last two or three years, less choice foreign coal for house use, such as West Hartley, Scotch Splint, or Wallsend, has been imported than in years preceding, for the reason that Pacific coast mine-owners have at all times sought to freeze them out by forcing upon consumers Wellington, Seattle, or Coos Bay coals at a less price than imports could be furnished. There is now less Australian coal on the market and to arrive than usual, owing to the scarcity of ships at Sydney or Newcastle, and the greater demand for carrying wool, etc., to the mother country, in preference to coming to this coast. Since the late advance in coals, shippers and importers in England, Scotland, etc., have sought to sell many cargoes to arrive next spring and summer, at some $2@$3 per ton advance upon like previous sales (to cover increased freights), but, so far as we are advised, but few orders have been given out to purchase, and few sales to arrive consummated. We, however, quote cargoes for shipment to arrive nominal at $7.50@$8 for Australian and for North and South Wales ; Steam, $7.75@$8.50 for Scotch and West Hartley.

The output in Washington territory of the Seattle coal mines for 1880 are thus stated in the Seattle *Intelligencer :* The coal exports of 1880 of the Renton and Seattle companies, using Seattle as their place of shipment, will be found below stated :

Month.	Renton. Tons.	Seattle. Tons.	Total No. Tons.
January	.....	1,365	1,365
February	738	14,649	15,387
March	827	5,911	6,738
April	772	16,275	17,047
May	.....	12,661	12,661
June	792	9,528	10,320
July	759	11,752	12,511
August	776	13,267	14,043
September	.....	11,334	11,334
October	2,723	10,276	12,999
November	.....	11,066	11,066
December	1,953	11,073	13,026
Totals	9,340	129,157	138,497

The shipments of April were the heaviest of any one month in the history of the trade, as were the shipments of 1880 heavier than those of any previous year. Except one small cargo that went on the brig Orient to Portland, and another that sank with the ship El Dorado, the coal above reported was all for San Francisco consumption. Our coal trade has now reached enormous proportions, and gives promise of going higher year by year in the future. The coal here is unlimited in quantity, and varied in quality, and with a sufficient demand can easily be supplied to the extent of a million or more tons per annum. The shipments of coal from this port have been from the beginning as below indicated :

Year.	Tons.	Year.	Tons.
1871	4,918	1877	112,734
1872	14,830	1878	128,582
1873	13,572	1879	132,263
1874	9,027	1880	138,497
1875	70,157		
1876	104,556	Total	729,136

Of all this coal shipped during the past ten years, 66,185 tons were from the mines of the Renton Company, at Renton and Talbot, and the remainder, 662,951 tons, from the mines of the Seattle Company, at Newcastle.

As regards the mines of British Columbia, it may be stated that Nanaimo shipped, in 1880, 272,000 tons, of which the Wilmington mine contributed 189,550 tons. We have not yet received the full aggregate output of all the mines there last year.

The total output of coal in 1880 in Nova Scotia was some 17,750 tons less than that of 1873, when 1,051,467 tons were mined ; while the total sales were 73,553 tons in excess, or a total of 954,659 tons.

THE AVERAGE SELLING PRICE AND SLIDING-SCALE FOR WAGES IN THE LEEDS COAL DISTRICT.

Through the courtesy of Mr. WALTER ROWLEY, M.E., Secretary of the West Yorkshire Coal-Masters' Association, we have received a copy of Memorandum of Agreement made between that association and the West Yorkshire Miners' Association. In accordance with this agreement, which is dated January 20th, 1880, and the report of the accountants, dated October 8th, 1880, the rate of wages which shall prevail and be paid at all collieries in the West Yorkshire Coal-Masters' Association for the next four months shall be 2½ per cent below the standard rate of wages as regulated by clause 5 of the agreement previously referred to. The reduction in the wages shall accrue on the first making-up day after October 9th, 1880.

The memorandum of agreement of January 20th sets forth that the wages of hewers and all underground workmen shall be regulated by a sliding-scale, based on the average selling price of coal, which shall be ascertained from time to time, by dividing the net amount realized at the pit's mouth, during each four months, by the total tonnage brought to bank and on which miners' wages have been paid during the same period. Each association is to appoint an accountant, pledged to secrecy excepting only as to the selling price of coal, who shall examine the books of not less than four representative collieries of the district, to be agreed upon by both parties. The average selling price for the twelve months ending December 31st, 1879, is to be taken as the *standard* price ; the rate of wages on January 20th, 1880, being paid at each colliery for coal-getting, straight work, datal, and all other underground work to be taken as the *standard* rate of wages at that colliery. Any disputed claims are to be adjusted by a joint committee of an equal number of colliery owners and of miners, who shall adjudicate, and, in case of disagreement, shall appoint an umpire, whose decision shall be final. The wages are to vary up or down, according to the variations in the average selling price of coal already set forth ; that is, "an advance of 2½ per cent upon the *standard* rate of wages for the first, second, third, and fourth completed advances of four pence per ton each in the average selling price of coal above the standard, an advance of 5 per cent for the fifth advance of four pence in the average selling price, and 2½ per cent (calculated in each case upon the standard) for every subsequent completed advance of four pence per ton in the average selling price ; and in like manner, the wages shall, from time to time, be reduced as the average selling price falls, according to the same scale of percentages as the advances are to be made. This sliding-scale shall operate without either a maximum or a minimum. All advances and reductions of wages shall accrue on the first making-up day after the report of the accountants shall have been received, and shall continue in force for a period of four months, and thereafter until varied according to the sliding-scale, by an advance or reduction in the selling price of coal."

The agreement is dated at Leeds, and is made for a term of two years, certain, from the 1st of January, 1880, and after that period shall continue in force subject to termination by six months' notice on either side.

The average selling price of coal in the district on December 31st last, as taken for the purpose of arriving at the standard to be adopted under the sliding-scale agreement, was 5s. 6·48d. The first investigation of the accountants took place on April 1st, 1880, when prices were found not to have been reduced a full four-pence per ton, therefore no alteration was made from the standard rate of wages then being paid.

The present (December) average rate of prices is 5s. ·44d., upon which amount a reduction of 2½ per cent has been made in wages. The last examination of the books by the accountants was made on January 1st, 1881, the results of which have not yet reached us. Subject to the concurrence of the owners, seven collieries have been mutually agreed upon as representative ones from which not less than four shall be selected for the purposes of investigation and arriving at the average selling price.

A PITTSBURG dispatch says that the Low Grade division coal miners of the Alleghany Valley Railroad, numbering 4000, who have been on a strike for an increase of ten cents a ton on screened coal and six cents on unscreened, have gone in, the operators conceding the advance.

THE VALUATION OF COAL.*

By Prof. Charles E. Munroe, U. S. N. A.

(*Concluded from page* 95.)

In order that the process should give reliable results, it is essential that the litharge should be pure. If, as was the case with Johnson's experiments, the litharge contains minium, the results will be too low. As some experimenters have found it difficult to obtain constant results with litharge, Mitchell has proposed the use of the ordinary carbonate of lead; but I am disposed to believe that this would be an unwise change, as the composition of the carbonate exhibits greater variations than that of the litharge. It has been said of Berthier's process that in the Admiralty investigation the results exhibit a variation often amounting to a virtual contradiction of the simultaneous results of direct combustion; but Johnson, on the other hand, gives results, to be cited farther on, in which the evaporative power, as determined by experiment, and the results of the litharge test closely agree. It may, however, be urged with some degree of fairness that too small a sample of the coal is taken for examination for us to be able to draw any useful conclusions as to the properties of the mass of the coal from the results; but this argument is equally valid when used against any laboratory process, such as the ultimate analysis, or the determination of the calorific power by a calorimeter; yet if care has been used in selecting lumps of the coal which represent the average character, and then these lumps are finely powdered and intimately mixed, any part of this will fairly represent the average quality of the mass; or we may follow the course prescribed for the assay of an iron ore. Break up in an iron mortar forty or fifty pounds of the coal into pieces that will pass through a sieve with one half inch meshes. Thoroughly mix the fine and the coarse. Now break up about ten pounds of this mixture, so that it will pass through a sieve with one fourth inch meshes. Mix well: take one pound of this and pulverize until it will pass through a sieve of sixty meshes to the linear inch. Mix well: take out fifty grams, pulverized in agate mortar, and pass through muslin bolting cloth. Of course, in the analyses given, the whole of this course of procedure was not followed, as we sought only to test the accuracy of the method by concurring results and not to analyze the coal.

L. Gruner† has also arrived at the conclusion that the calorific power of a coal can not be accurately determined by its elementary analysis. He holds that a more correct estimate of the heating power of a coal is obtained by determining the average amount of coke which it yields. The higher the yield of coke, the greater is the heating power, but this heating power does not diminish in the same ratio as the yield of coke; thus, for a decrease in the yield of coke from 80·4 to 59 per cent, the heating power diminishes only from 9622 to 8215. In using the percentage of coke as an estimate of the value of the coal, Gruner conflicts with other investigators who hold that it is an uncertain guide, since wide differences have been found in the evaporative power of different coals which possessed an equal average amount of fixed carbon. From the consideration of the amount of coke, it will be seen that he is led to a system of classifying coals which is almost identical with Johnson's, published in 1844.

He groups the different kinds of coal arbitrarily in five classes, as follows, though there is no distinctly marked division between any two:

Distinguishing Property.	Elementary Composition: C	H	O‡	Relation of $\frac{O}{H}$	Residue of Coke on Distillation.	Appearance of Coke.
Dry coal, burning with a long flame	75 to 80	5·5 to 4·5	19·5 to 15	4 : 3	0·50-0·60	Powdery, or slightly caked.
Bituminous coal with long flame, or gas-coal	80 to 85	5·8 to 5	14·2 to 10	3 : 2	0·60-0·68	Fused, but deeply seamed.
True bituminous coal, or smithy coal	84 to 89	5 to 5·5	11 to 5·5	2 : 1	0·60-0·74	Fused, and tolerably compact.
Bituminous coal with short flame, or coke coal	88 to 91	5·5 to 4·5	6·5 to 5·5	1	0·74-0·82	Fused; compact; very slightly seamed.
Anthracite coal	90 to 93	4·5 to 4	5·5 to 3	1	0·82-0·90	Powdery.

The length of the flame depends on the amount of volatile matter, the combustibility of the coal on the nature of the ash. If the ash contains iron and lime, a slag forms; if it contains alumina and silica, it remains in a powdery form, which is more favorable to the combustion of the coal. The first class, *dry coal with long flame*, is used for making coke. The sp. gr. is about 1·25. The color is usually brownish. A proximate analysis gives—

Coke.	Ammoniacal liquor.	Tar.	Gas.	Volatile matter.
50-60	12-5	18-15	20-30 per cent.	50-40 per cent.

Calorific power, 8200–8300. As soon as the carbon exceeds 80 per cent, and the oxygen is under 15 per cent, this class of coals begins to coke on heating.

(2.) *Bituminous Coal with long flame* (gas-coal).—The coke obtained from this coal is always caked together. The coal itself is hard, the fracture laminated. The sp. gr. is 1·28–1·30. Color, pure black, with strong luster. Proximate composition—

Coke.	Ammoniacal liquor.	Tar.	Gas.
60-68	5-3	15-12	20-17 per cent.

Volatile matter, 40–32 per cent; calorific power, 8500–8800.

(3.) *True Bituminous, or "Smithy Coal."*—Color, pure black, with high luster; brittle, with laminated fracture. Fuses when burning, leaving the coke in a compact cake. Sp. gr., 1·3. Proximate analysis—

Coke.	Ammoniacal liquor.	Tar.	Gas.
68-74	3-1	13-10	16-15 per cent.

Volatile matter, 32–26 per cent; calorific power, 8800-9300.

(4.) *Bituminous Coal with short flame, or "Coking Coal."*—This class exhibits the same properties as the previous one; its luster, however, is not so great. It is very brittle, and although it is termed *dure* in France, this means that it does not burn away quickly. It does not contain much volatile matter, and is consequently difficult to kindle. Sp. gr., 1·30–1·35. Proximate composition—

Coke.	Ammoniacal liquor.	Tar.	Gas.
74-82	1-1	10-5	5-12 per cent.

Volatile matter, 26–18 per cent; calorific power, 9300 9600. One kilogram of this coal evaporates 9·75 kilograms of water.

(5.) *Anthracite Coal.*—This coal forms the link to pure anthracite. It is black, and shows dull streaks. Its cohesion is slight, but increases the nearer it approaches the character of pure anthracite. Sp. gr., 1·35–1·40. Proximate composition—

Coke.	Ammoniacal liquor.	Tar.	Gas.
82-90	1-0	5-2	12-8 per cent.

Volatile matter, 18-10 per cent; calorific power, 9200–9500. One kilogram, calculated without ash, evaporates 9·15 kilos of water; but as it usually contains 10–11 per cent of ash, its real evaporative power is 8·12 kilos.

C. Hilt* likewise regards the yield of coke, together with the amount of ash, as of especial importance in the valuation of coal. He gives a classification of coals according to the ratio between the quantities of bitumen and coke which they yield when ignited in a covered crucible.

	Bitumen : Coke.		Bitumen : Coke.
1. Anthracite	1 : 2	to	1 : 9
2. Flint coal (old), yielding but little gas	1 : 9	to	1 : 5·5
3. Coking coal	1 : 5·5	to	1 : 2
4. Coking gas-coal	1 : 2	to	1 : 1·5
5. Flint coal (young), yielding much gas	1 : 1·5	to	1 : 1·25
6. Gas-coal	1 : 1·25	to	1 : 1·1

If the bitumen or volatile matter be expressed in terms of ash-free coke, we have:

Bitumen.	Bitumen.
No. 1 contains 5 to 10 per cent.	No. 4 contains 33·3 to 40 per cent.
No. 2 contains 10 to 15·5 per cent.	No. 5 contains 40 to 44·4 per cent.
No. 3 contains 15·5 to 33·3 per cent.	No. 6 contains 44·4 to 48 per cent.

About the year 1842, Prof. W. R. Johnson began, under the auspices of the Navy Department, a series of experiments to determine which, among our many varieties of coal, was best adapted to and most economical for the purposes of the navy. Similar investigations were also subsequently undertaken by Dr. Lyon Playfair and Sir Henry de la Beche with the British coals. In both these researches the following principles were stated as governing the end sought:

1st. The fuel should burn so that steam may be raised in a short period, if this be desired; in other words, it should be able to produce a quick action.

2d. It should possess high evaporating power—that is, be capable of converting much water into steam with a small consumption of coal.

3d. It should not be bituminous, lest so much smoke be generated as to betray the position of vessels of war when it is desirable that they should be concealed.

4th. It should possess considerable cohesion of its particles, so that it may not be broken into small fragments by the constant attrition which it may experience in the ship.

5th. It should combine a considerable density with such mechanical structure that it may be easily stowed away into small space—a condition which in coals of equal evaporative values often involves a difference of more than twenty per cent.

6th. It should be free from any considerable quantity of sulphur, and it should not progressively decay, both of which circumstances render it liable to spontaneous combustion.

Great importance was attached to the determination of the evaporative power, which was accomplished by burning weighed quantities of coal under a boiler of known dimensions and measuring the quantity of water evaporated. Of course, at the same time the area of the grate surface, of the combustion-chamber, of the heat-absorbing surface, and the length and area of the flues were also known. The conditions under which the experiments were conducted were apparently like those which exist in practice, and promised to lead to positive results; yet the results given in Johnson's Report in 1844, and the British series of reports, concluded in 1851, after showing that no fixed relation exists between the calorific power as calculated from the results of analysis and the evaporative power of the coal, also "prove, by the very differences which they exhibit, that the only trustworthy method of determining the value of a fuel for steam purposes is that of practical experiment under the boiler in which it is to be used, and where several tons and not pounds are consumed." The results of such experiments can not, however, be considered as applying to furnaces and boilers dissimilar to those actually used. The conditions attending the advantageous combustion of coal resemble those which obtain for the combustion of coal-gas for illuminating purposes. To obtain the highest photometric power for a given gas, a certain form of burner, number of apertures, rate of flow, and length of chimney are found essential, and these are determined by experiment. To get the maximum effect with a gas from another source, some or all of these conditions must be varied. For this reason, and others which might be given, notwithstanding the conclusions of the Admiralty's Board, the results of laboratory experiments which are conducted under similar conditions for different coals can not but be of value in deciding the fitness of a fuel for the purpose to which it is to be applied.

In the English experiments, besides the determination of the evaporative power, Berthier's litharge test was applied, and the loss by attrition was also estimated. "This factor, which is of extreme importance in steam navigation, becomes reduced the more the cleavage of the coal or the shape of the fuel approaches the form of a cube. In order to attain at least a relative idea of the waste occasioned by transport—that is, of the attrition of the individual pieces of coal against each other, and the conversion of unbroken coal into dust, unfit for use, which is occasioned by the motion of the vessel—the various specimens were rotated in a drum for the same length of time, and the dust thus produced separated and weighed." The subjoined table shows some of the results of the British investigation. 1. No. pounds of water at 100° C. converted into steam by one pound of fuel. 2. Ditto after deducting portions of coke contained in ash. 3. Theoretical evaporative power in pounds of water at 100°, as calculated from litharge test. 4: Weight of coal per cubic

* A paper read at the Naval Institute, Annapolis, Md., April 8th, 1880. From the Proceedings of the Naval Institute.

† *Ann. Min.* 1873, iv., 169.

‡ The O includes N, but the latter rarely exceeds 1 per cent of the combustible matter.

* *Ding. Pol. Jour.*, ccviii., 424.

foot of stowage in pounds. 5. Ditto per solid cubic foot deduced from specific gravity. 6. Percentage loss by equal amount of attrition.

KIND OF FUEL.	1	2	3	4	5	6
Welsh—						
Jones & Co., Anthracite	9·46	9·70	13·84	58·25	85·79	68·5
Ward's Fiery Vein	9·40	10·60	17·40	57·43	83·85	46·5
Graigola	9·35	9·66	16·72	60·17	81·11	49·3
Duffryn	10·14	11·80	15·64	53·22	82·72	56·2
Ponty Pool	7·47	8·04	14·31	55·70	82·35	57·5
Ebbro Vale	10·21	10·64	16·68	53·30	78 81	45·0
Bedwas	9·79	9·99	14·70	50·50	82·60	54·0
Scotch—						
Dalkeith Jewel	7·08	7·10	13·77	49·80	79·67	85·7
Wallsend Elgin	8·46	8·67	15·15	54·60	78·61	64·0
Fardel Splint	7·56	7·69	15·12	55·00	78·61	63·0
Grangemouth	7·40	7·91	14 85	54·25	80·48	69·7
English—						
Broomhill	7·30	7·66	13·20	52·50	77·99	65·7
Park End, Sydney	8·52	8·98	.....	54·44	80·05	55·0
Irish—						
Slieverdagh	9·85	10·49	16·21	62·80	99·57	74·0
Mean of three patent fuels	9·27	9·66	15·44	66·48	70·66	....

From the examination of this table and a comparison of columns 2 and 3, it will be seen that the litharge test occasionally gives results at variance with those obtained by the evaporative test, but as a rule they are concurrent. When the results disagree, it would be interesting to know what results are actually obtained in practice.

The results obtained by Johnson are more concurrent, and are exhibited in the following table, together with the results of M. Baudin by the litharge method:

No. of specimens assayed.	Nature of Coals.	Evaporative power, by experiment.	Lead reduced by 1 of combustible.
8.	7 Penn. anthracite, 1 natural coke of Va	10·537	32·157
11.	Md. and Penn. free-burning coals	10·877	31·736
10.	Va. bituminous	9·523	28·194
8.	Foreign and western highly bituminous	8·710	27·740
3.	French anthracites		33·520
3.	Free-burning coals		32·040
3.	Bituminous coal		29·830
3.	Highly bituminous		27·586

Professor Johnson believed the lead-reducing power of the coal to depend on the carbon constituent, and cites the following instances in support of this view: The ultimate analysis of Cambria County, Pa., coal gave 91·955 per cent of carbon, and experiment showed its lead-reducing power to be 31·464. Again, ultimate analysis showed Clover Hill, Va., coal to contain 83·393 per cent of carbon, and this on experiment yielded 28·527 parts of lead. Now the ratio of the percentages of carbon is to that of the lead produced as follows: $\frac{91·955}{83·393} = \frac{31·464}{x}$, where $x = 28·534$, which may be considered as identical with that obtained by experiment.

Important experiments upon the evaporative power of American coals and of the evaporative efficiency of different boilers and furnaces have been carried on for some years and are still being pursued by a board of Engineers of the Navy, under the direction of Chief-Engineer B. F. Isherwood, and it is probable that, as our data accumulate, we may be able to discover some closer relation between the results of experiment and those of use; but the value of these results would be greatly enhanced if the fuels employed were also subjected to analysis, and their calorific powers determined by the various methods suggested; for we might, from the data thus collected, be able to effect the complete solution of the problem stated at the opening of this paper.

The presence of sulphur in coal may sometimes be detected by simple inspection; for as it frequently exists in the form of iron pyrites, these, or the rust produced by the weathering of the crystals, may generally be readily observed. Sometimes these crystals may be so finely disseminated through the mass that they can not be seen, or the sulphur may be present in another form. A rough way for detecting the sulphur may then be used, which is as follows: The powdered coal is fused in an iron vessel with twice its volume of carbonate of soda. The fused mass, when cold, is then placed on a bright silver or copper surface, and moistened with water. If sulphur is present, the metallic surface will be blackened by the formation of a film of sulphide. To make sure that the carbonate contains no sulphur, it must first be fused and tested in the same way. I have now in hand some experiments by which I hope to test for sulphur at the same time that I am making the lead test, the results of which will be given later.

The nature of the ash, the readiness with which the coal burns, and the determination of the amount of ash, are factors which are only to be obtained by the combustion of the coal. The process usually followed, of burning the weighed coal in a weighed iron vessel, is correct in principle, but of course, as conducted in the laboratory, the errors incident to the corrosion of the iron when heated are avoided by the use of non-corrosive material. In every way, too, the process used there is more delicate: yet the process used in the engine-room gives fair results.

NOTE.—The calorific power given by Scheurer, Kestner, and Meunier were determined by experiment with Favre & Silbermann's calorimeter. The data given by Gruner are also the results of experiments.

Gold and Silver in Spanish Pyrites.—The quantity of silver which has been extracted in England, as an accessory product of the pyrites imported from Spain, has been, according to *La Gaceta Industrial*, 18,000 ounces, and the quantity of gold about 700 ounces. A new industry has thus arisen from a product which no one suspected a few years ago to have any merchantable value.

Phosphor-Bronze Telegraph Wires.—Prof. E. Bède, formerly of the Liége University, recommends phosphor-bronze for wires, it having four times the conductibility of iron, and being from three to four times as strong as steel. Aërial lines are easily inspected, but are liable to accident, while underground lines are almost exempt from accident, but difficult of inspection.

NORTH SHORE OF LAKE SUPERIOR.

EDITOR ENGINEERING AND MINING JOURNAL:

SIR: It might be of interest to your readers to have a short account of this region. The richest mine on this shore is the Silver Islet mine, which has already yielded over three million dollars in silver. This property you have already noticed from time to time in the JOURNAL.

The property of the Thunder Bay Silver Mining Company is not worked, although known to be rich in native silver.

The Duncan mine is owned principally in Boston, and the gangue now taken out resembles very much the Silver Islet vein. This property was examined by Mr. John C. F. Randolph, of New York, and his report was favorable. He pronounced it a counterpart in all its characteristics of the Batopilas mine in Mexico, and is very sanguine as to its ultimately proving to be equally valuable; good stamp rock is now taken from some of the levels, but the work of sinking the main shaft is prosecuted vigorously, and the vein is improving rapidly in appearance as it descends.

The Thunder Bay Iron Company is developing some rich iron locations. Assays of the ore run from 62½ to 67½ of metallic iron, the ore being of the quality known as hematite. This company is a private one, consisting of Chicago and Buffalo capitalists. They intend to erect a blast-furnace, if any encouragement is given by the government.

The McKellar's Island silver mine is another property on which work has just begun. It is on the same belt of diorite as the Silver Islet mine, and is expected to prove valuable. This is also worked by Chicago capital.

The Little Pic gold mine is another property on which work is only beginning. The gold quartz is said to be rich, and will, it is expected, assure a paying investment to the owners.

The Mammoth gold mine is a newly-discovered one, and will be opened up this season. It has a well-defined vein of low-grade quartz, carrying gold and silver. It is traced for a distance of six miles, and has an average breadth of 35 to 40 feet. The discoverer, an old Californian, has had a large experience, but thinks this surpasses any thing he has ever before met with.

There are many opportunities of purchasing undeveloped property at very low prices, for the simple reason that the owners are men of limited means, and can not themselves undertake the opening up of the several properties.

Much interest is taken at the present time in this district, and it is certain that the coming spring will show a great deal of activity in the mining region on the north shore of Lake Superior. It is almost impossible of belief that a region of such vast extent, and exhibiting as it does such proof of great wealth, should have hitherto been so little developed. The product of Silver Islet and other mines in the vicinity is proof that the wealth exists, and that it remains for the enterprising capitalist to unfold it.

CHARLES A. EVERITT.

P. A. LANDING (L. S.), ONT., Jan. 16.

COAL NOTES.

A DISPATCH from Kingston, N. Y., dated February 5th says: The demand for coal at the depot of the Delaware & Hudson Canal Company in this city is becoming unusually brisk of late, and fears are entertained that the supply on hand will be exhausted before the opening of navigation. The Rhinebeck & Connecticut Railroad Company lately bought 1500 tons, and now Leonard & Youngman, of Albany, have just secured all the remaining egg and stove coal on the wholesale dock, there being about 2000 tons of the former and 4000 of the latter size in the purchase. Twenty teams are now engaged in hauling this coal across the river to Rhinecliff, where it is loaded into cars for Albany. This order leaves 29,000 tons of furnace and steamer lump on the wholesale docks of the company here. Some of this is being broken into smaller sizes by a few retail dealers. The retail sheds of the company contain only about 2500 tons of stove and chestnut, which it is feared will not supply the local demand. Saugerties, Catskill, and other river villages are already out of coal. Other retail dealers in the city complain of a short supply. There has been no advance in price as yet.

A DISPATCH from Pittsburg, dated February 9th, says: The break in dam No. 1, Monongahela River, is a terrible calamity to the coal interests of this city, and the losses that will be sustained thereby can not be estimated, inasmuch as the down river coal trade will be affected equally with that here. The water has all drained out of the pool, leaving scores of coal-laden boats and barges lying high and dry. It will be impossible to move these until the dam is repaired, and this can not be accomplished until summer at the least. Meanwhile no coal can be gotten out, and a famine will surely result. To-day several large iron mills were forced to suspend operations, being unable to draw water from the river on account of the low stage it has reached.

IT has been decided to build a broad-gauge railroad in Colorado, in the interest of the Union Pacific Railroad Company, the line starting from Denver and extending directly through the coal-fields of Boulder County to Longmont, and from Fort Collins up the Cache la Poudre into the North Park, and thence into the Middle Park by way of Muddy Tapping, the new mining camp at Lead Mountain. A large force of men is now at work grading the line.

A DISPATCH from London (Eng.), dated February 7th, says: A mass-meeting of miners at Pendlebury, Lancashire, has decided to strike for an advance of twelve and one half per cent in wages. Fifteen thousand miners are affected by this decision. Nine thousand miners are out on strike in various other districts. Seventeen men are imprisoned and supposed to have perished by a colliery explosion in the Whitfield Colliery, near Chell, Staffordshire. The pit took fire and is still burning.

THE Nichols & Hoagland coal mine at Golden, Colorado, produces about 150 tons of coal daily. One third of this is delivered in Denver at $4 a ton. 20 tons go to Georgetown at $6 per ton, and the rest is delivered at Central at $5.75, or at Black Hawk or Idaho at $5.50 per ton.

A RECENT number of the Trinidad (Colo.) *Republican*, contained the following: The Narrow-Gauge Coke and Coal Company yesterday shipped to Leadville 32 cars of coke. This was a little heavier shipment than usual, the general average being about 20 cars per day. The company

has now in full blast 140 ovens. Each oven makes one ton of coke every 48 hours, and it takes four tons and a half of coal to make a ton of coke. It will thus be seen that the coal industry at the Narrow-Gauge mine is stupendous, requiring no less than 630 tons of coal per day to run the ovens.

(*For additional matter, see page* 123.)

PROGRESS IN SCIENCE AND THE ARTS.

Transportation by Ropes in Mining.—Mr. H. Rider has recently patented in England improvements in apparatus for the transport or removal of overlying earth or strata in getting ironstone or other ores. Instead of wheeling away the earth on planks, transportation is effected by means of a rope strained across the chasm and serving as a guide, along which travels a tub holding the earth. The rope, anchored at one end, is supported at any desired hight above the ground by a tripod or other convenient support on the bank; the rope being supported at the other end by a post set near the working surface of the excavation. The end of the guide-rope is attached to a slide on the post; and for raising this slide, when required, another rope or chain is led up from it, over a pulley hung from the top of the post, and this lifting rope is taken to a winch or other power conveniently placed on the surface. A steam winch would serve for many sets of transporting gear. The tub is hung from a pulley or pulleys running along the guide-rope, and when filled, the slide is drawn up on the post until the guide is inclined so that the wheels from which the tub hangs run by gravity along the guide-rope over to the other side, until the tub reaches the bank.

Snow-Clearing in Milan.—In the presence of the disgraceful condition of the streets of New York, and in the absence of any apparent effort to do their duty on the part of those who, by a most charitable use of words, are called the *proper* authorities, it is interesting though humiliating to read what has been accomplished in Italy. One of the abstracts of papers published by the London Institution of Civil Engineers contains an account by Signor E. Bignami Sormani, of snow-clearing in Milan, which will be interesting reading for our commissioners. In Milan, the snow-carts are emptied into the navigable canals and numerous water-courses intersecting the city; and latterly also into the new sewers in the central portion of the city, the sewers being promptly flushed whenever it snows. During the winter of 1879–80, the cost of clearing the 1,656,000 square yards total areas of squares, streets, and lanes within the city walls averaged $1000 per inch depth of snow fallen; and for the 502,800 square yards outside the walls, the average cost was $310 per inch depth. In the winter of 1874–5, the total fall of snow was 40¾ inches, and the cost of clearing it away within the city walls was $42,000; while in 1877–78, less than $5200 was expended in clearing away a total snow-fall of 5¼ inches. Ordinarily, the clearing of the more frequented streets is completed within eight or ten hours after it has stopped snowing, and of the rest within twenty-four hours, not reckoning night. This is the way it is done, Captain Williams. The city is parceled out into 112 small districts, of varying extent, according to the importance of the work in each. Each district is allotted to a contractor, who usually associates with himself from six to ten partners, besides the laborers whom he employs. The contractor finds carts, horses, and carters; spades, shovels, brooms, scrapers, mattocks, barrows, etc., are furnished by the city. The contractors, with whom agreements are made annually, and who almost always apply year after year, come principally from trades interrupted by winter—paviors, bricklayers, masons and gravel quarrymen. The city is divided into four sections, over each of which is an engineer, with an assistant, aided by police surveillance. Payment is made only for work effectually done. The number of men ordinarily engaged in snow-clearing is not less than two thousand, and sometimes has been three thousand. The stock of implements, found by the city, represents a capital of about $8000, and is housed in opposite quarters of the city. In each snow-storm, the depth of snow falling, which is the basis of pay, is determined by means of stone posts, fixed in suitable open spaces, clear of shelter from buildings, and each capped with a flat horizontal slab of stone. As soon as it stops snowing, or two or three times during a storm of several hours, the depth of snow caught is measured by the engineer in the presence of two of the contractors in his section. It is noteworthy that the density of snow freshly fallen varies from only 71 pounds to 814 pounds in a cubic yard. But it is also noteworthy that, whatever its density or its volume, it is removed expeditiously and cheaply—a result ascribed by the author to the organization of the admirable arrangements by his predecessor, Signor Annibale Gaffurini. The name, we presume, is unknown to the street commissioners of our city.

Solution of Bromine as a Reagent.—Bromine is more and more employed as an analytical reagent. Used alone, it is not convenient, and a solution in water or in hydrochloric acid has been recommended. The former has the defect of being very dilute; the hydrochloric solution is much more concentrated, but strongly acid. For three years, L. L. De Koninck has successfully used the solution of bromine in a ten per cent solution of potassium bromide. The author recommends it for the precipitation of manganese from an acetic solution, for the conversion of arsenious into arsenic acid, and for the detection of nickel in presence of cobalt in a potassium cyanide solution.

New Railroad Construction —The *Railroad Gazette* of February 11th gives 39 miles of new railroad, being a total of 110 miles reported for 1881.

FATAL EXPLOSION IN AN OHIO MINE.—CLEVELAND, Feb. 10.—A frightful explosion took place to-day at P. C. Monser & Co.'s coal mine, at the Robbins mines, at the end of the New Lisbon Railroad. About twenty men were at work at the mine, six of whom were killed outright, and a number dangerously wounded.

GENERAL MINING NEWS.

ARIZONA.

GIRARD.—The Tombstone *Epitaph* says: This mine, which is next adjoining the Tough Nut on the south, has a fine showing of carbonate and chloride ore on the 345-foot level, which is opened to a length of 100 feet. The main shaft is now down over 400 feet, and sinking is still progressing. The company has 300 tons of milling ore on the dump, which is increased daily.

PALMETTO DISTRICT.—The *Citizen* of January 27th says: The work most worthy of mention is that of the Giant, Ironclad, Monitor, Crown Point, Sonoita, and Western Star, all on one ledge of good size and well defined, between a granite and porphyry formation; each of these mines showing good-sized piles of pay-ore on the dump for the amount of work done, each having shafts from 10 to 30 feet deep on the ledge in ore. The Emperor and Grand Deposit show rich ore, and give promise of becoming valuable mines, and the Bully, Wano, Guyno, and Haven are good prospects.

SURPRISE.—The Arizona *Journal* of late date says: This mine is situated about a mile southeasterly from the Mack Morris. The shaft is now down 35 feet deep on the ledge, which is from three and a half to five feet wide. The lode has also been stripped near the surface by an open cut over 100 feet long, which shows a well-defined vein, with solid syenite walls averaging over four feet wide, and assaying from 50 to 300 ounces to the ton. The ore is silver glance.

CALIFORNIA.

GREENVILLE DISTRICT.

The following notes regarding the mines of this district are taken from the Greenville *Bulletin* of the 26th ult.:

CHEROKEE.—The weather has been more favorable for operations at this mine, the roads have been constantly improving, and the hauling of ore has been again resumed. The mill will be started in a day or two, we hope, for a steady run. Additional silver plates have been provided for the sluices, and increased returns may be expected in consequence. At the mine, every thing is looking and working well. The Garfield shaft is being put down rapidly. The new pump would handle five or six times the quantity of water thus far encountered, with the greatest ease.

GOLD STRIPE.—Steadily and surely the regular routine of work progresses at this mine and its mills, giving every indication of an almost unfailing supply of pay-ore.

GREEN MOUNTAIN.—Both mills have run without interruption during the past week, and with good results. No. 5 tunnel is showing a fine copper-stained ore in the main pay-chute. A large body of water was encountered here last week, making it necessary to suspend operations temporarily, but work has been resumed, the excessive quantity of water having come from the old shaft and works above, and abating when those works were drained.

SAVERCOOL.—The new 40-stamp mill is running, and though we have no late definite information from there, we hope to hear good reports of successful work.

SOUTHERN EUREKA CONSOLIDATED.—By the last of this week, the new 10-stamp mill of this company will be all completed and ready for operations.

CANADA.

BRITISH COLUMBIA.

The gold shipments of this province for 1880 amounted to $705,000.

NOVA SCOTIA.

We understand that the proclaimed limits of the Montagu Gold District are to be extended eastward and westward, and claims are rapidly taken up.

Messrs. Kaye, Symonds & Co. have opened up an 18-inch lode, some 2000 feet west of their old workings; 10 tons having been crushed, gave 3 ounces to the ton. The new opening on the Rose lode promises well; arrangements are making for opening new shafts on the property. The barrel lodes are opening up and show well.

The yield of the gold mines in the Sherbrooke District for January, from the office of the inspector of mines, was 201 ounces 7 dwt., the product of 311 tons of quartz crushed.

The government will, we understand, offer a prize at the next Dominion Exhibition for the best process of amalgamating.

COLORADO.

CLEAR CREEK COUNTY.

The Georgetown *Courier* of the 3d inst. and *Miner* of the 29th ult. bring the following regarding these mines:

ATLANTIC-PACIFIC.—The *Miner* says:

The diamond drills and machinery for use in the Atlantic-Pacific tunnel were shipped from Denver a couple of days ago. A company has been formed for working the drills, which will be put in operation at the earliest practicable moment. They are of an improved pattern, one of the improvements greatly facilitating taking down and setting up the drills. The superintendent of the drill company has agreed to have every thing in operation by the 16th of February. The company is working three eight-hour shifts on the tunnel, which is now in a distance of 150 feet—within 75 feet of the Cash vein, which is said to look very promising at the surface. A blind lode six feet in width has been intersected already.

DIAMOND TUNNEL.—The *Miner* says that recent developments in the No. 5 lode west of the tunnel have resulted in the discovery of ore of high quality, consisting of polybasite and gray copper. Without entering at all into details, we may state that there are six different parties or less at work, all of whom are working on ore. The tunnel is driven ahead as rapidly as possible, and every body connected with the enterprise is confident of success.

NYANZA.—This property is located on Democrat Mountain, the westerly end of the claim falling near the shaft-house of the Rogers mine. It is owned by the Nyanza Silver Mining Company, of New York, and was discovered as early as the year 1867. For several years succeeding, numerous superficial developments were made, and at every point the existence of a lode of more than ordinary strength was determined. These surface explorations were conducted at intervals of from 50 to 100 feet for a length of 500 feet, and at every point ore assaying from 50 to 600 ounces was extracted. This was near the crest of the mountain, the increasing depth of slide on the eastern slope interfering with surface work in that direction. The developments mentioned are all the way from ten to sixty feet deep. It is only within the past nine months, however, that any attempt at systematic development has been made. A cross-cut has been run to the lode from the Providence tunnel, and the results are unusually gratifying, revealing a strong fissure-vein that carries a good vein of mineral at the point of intersection. This is reached by a cross-cut 248 feet in length, commencing at a point in the Providence tunnel 437 feet from its mouth. The cross-cut has been run completely through the lode and into the south wall several feet, showing the crevice to be from ten to twelve feet in width. The lode is mineralized throughout where intersected, and its exploration has been fairly commenced nearer the north wall, where it is opened by a drift ten feet long on the west and about five feet on the east, showing a continuous vein of ore which is considerably decomposed, although it is about 240 feet from the surface, this fact alone proving the great strength of the deposit. The regular ore vein is not less than three feet in width, in which is included a streak of fine-grained galena, more or less solid, of from five to eight inches in width. This is considerably decomposed and quite friable. Besides this, galena is scattered throughout the width of the drift in bunches and streaks.

STEVENS.—The *Courier* says that about four tons of ore are produced daily,

and three car-loads are shipped to the smelting-works at Golden each week. There are twenty men employed at the mine, the work at present being confined to drifting and stoping on the eleventh level, 134 feet below the tunnel level, where there is a fine vein of galena ore from 20 to 24 inches in thickness. As soon as the weather in the spring will permit, an engine will be put in the mine at the main shaft, which will enable drifting to be commenced on the ninth and tenth levels, both of which are also in ore.

UNADILLA.—The Silver Rock mine, at the foot of Silver Creek, is the property of the Unadilla Mining Company, of New York. Thus far, but little work has been done on it, the developments consisting in part of an adit about 20 feet in length. There is a little mineral in sight. A contract has recently been let for running in an adit a farther distance of 30 feet.

According to the *Courier*, the company's superintendent reports that a fine body of ore has been found at the bottom of an old shaft, 65 feet deep, on the Eagle lode, owned by that company. The shaft was sunk about twelve years ago, and since then has been partly filled with water and *débris* until last week, when the superintendent had it cleaned out, and was rewarded by finding a ten-inch vein of ore that assays $91 per ton in gold and silver, and 10 per cent copper. Twelve years ago, ore of that grade was almost valueless, but now the ore of some of the most profitable mines in the county does not average better. A force of men has been set to work at sinking the shaft, and soon shipments will be made regularly to the Argo works.

CUSTER COUNTY.

SILVER CLIFF.—The Silver Cliff *Republican* says that a recent blast in the Racine Boy mine threw out 25 tons of ore. The miners are taking out the pillars at the west end of the cut, and this was the cause of the blast being so large. Some of the rock is low grade, but a large body of the ore taken out lately was as rich as any ever extracted from the Racine Boy mine, containing, as it did, large quantities of horn-silver. Men are employed on the surface taking off the dirt and worthless rock, preparatory to the blasting out of other pillars of ore that have been used as supports for the surface. The Racine Boy mine never showed richer mineral than it does to-day. Other men are at work on the Cliff mine, adjoining the Racine Boy. The rock of this mine is very much shattered and broken, and large quantities of it can be taken out without blasting. A tramway has been constructed from the cut to a point near the blacksmith-shop, and here the ore is dumped. The stamp-mill being erected for these ores is rapidly building, and will be completed about the 1st of March. Two of the boilers have been set, and the tubs and pans have been placed in position. The carpenters are busy putting the blocks in place for the battery. The mill presents quite a lively scene of activity by the men employed in the various kinds of work. The contractors are doing all that is possible to hurry the completion of the mill. The company also has men at work uncovering the pipes of its old water-ditch. The old piping will be taken out as far as Cliff street, where connection will be made with the mains of the water-works.

FREMONT COUNTY.

In a recent issue of the JOURNAL, we printed a dispatch announcing the fact that coal-oil had been struck on the property of the Grand Cañon Coal Company near Cañon City. In an interview with a representative of the Denver *Republican*, Mr. A. M. Cassidy, the president of the company, gave a history of experiments leading to the discovery, the substance of which we give below:

Mr. Cassidy has long been an experimenter for petroleum in Colorado, and the strike was the realization of hopes long deferred. As early as 1867 or 1868, he discovered and owned the old Oil Springs, 13 miles north of the point where the present strike was made. In 1868 or 1869, he sank the first well, near the Surface Springs, in the valley of Oil Creek, six miles north of the Arkansas River. He there passed through the oil-bearing rock at a depth of thirty or forty feet, and then went into volcanic rock, and penetrated that to a depth of 600 or 700 feet. The total absence of oil indications at that depth caused him to relinquish work on this well. He had expended a great deal of money, but was not discouraged and had not lost faith. He simply came to the conclusion that he had struck the wrong locality. He decided to try his luck elsewhere. He traced the formation, and satisfied himself that the dip was south by east, and concluded that petroleum would be found near Cañon City, at a depth of 1000 or 1100 feet. Two years ago, he commenced boring there, and reached a depth of 900 feet, when a break through which it was impossible to penetrate was struck, and the well had to be abandoned, without striking oil. Mr. Cassidy then determined to sink a well about a mile south and east of where the now successful well is located. In the mean time, however, the Grand Cañon Company commenced sinking an artesian well adjoining its engine and boiler-house. The boring was continued to a depth of 400 feet, when a small flow of salt water was encountered. This was an "oil indication," and the idea of water was abandoned, and the boring continued for oil. On Monday last, at a depth of 1445 feet, in third sand, oil was struck. The oil is a pure petroleum, of a deep green tint, and both railroads, which have tested it, pronounce it a first-class lubricator. With the sand-pump, from five to eight barrels a day are secured. The gas is rapidly accumulating in the well, and a flow is feared. To avert this, the boring was discontinued until precautions could be taken to prevent the gas or oil from communicating with the fires in the boiler-house.

GILPIN COUNTY.

We are indebted to the *Register-Call* for the following:

Levels are being driven east and west in the working shaft of the Hidden Treasure lode at a depth of 1100 feet. The crevice both ways from the shaft keeps its usual width, the mill-ore being good for five ounces gold per cord.

The Williams mine, Lake District, property of the Gilpin County Mining Company, still holds its own as a regular producer of ore. The levels and back-stopes are in pay, and every thing connected with the mine is working smoothly. The yield of gold from the mine is fully as good this month as last.

The United Gregory Mining Company is having its machinery over No. 2 or pump shaft overhauled and placed in a better condition for doing service in hoisting the material mined to the surface, as well as running the Cornish pump. Connection between the pump and east shafts has been made by levelage. The new management of this property intend having every thing in order by the first of March next, to continue developments to a greater depth than has been attained in the workings of the Gregory lode.

LAKE COUNTY.

CARBONATE.—A small force is kept working during the day shift at this mine, the property of the Leadville Consolidated. The product amounts to but from 50 to 60 tons of ore per month, but the grade is good.

CATALPA.—Since the sale of the Crescent mine to this company, active preparations have been made to work the property extensively. The long incline is still worked, though in a short time the drifts running from the Catalpa, the adjoining property, will be the main exit for the ore.

CHRYSOLITE.—In reference to the present condition of this property, the Leadville *Democrat* says: The Chrysolite mine was visited by the mining reporter of the *Democrat*, who found it in a very flattering condition. The surface showed every indication of the mine being prosperous and productive, except the ore-house, the ore-bins of which presented a marked emptiness that can not be passed by without allusion. The engines are kept working with great regularity, and large quantities of waste are being hoisted. The dump to the southward of the Roberts shaft-house is slowly but gradually increasing in size, and will soon form a hill independent of Fryer, in which future generations can prospect, and wonder how the formation can be so broken, and speculate on the terrific power which broke up into such small fragments, and inextricably mixed the iron, lime, porphyry, and bits of low-grade mineral. There will be no veins, breaks, faults, or porphyry dikes for the managers to puzzle their brains over, and the business of the expert will be played out as completely as some of their present theories and predicted ore-bodies. But to return to the mine as we found it yesterday, in which the readers of this column are doubtless far more interested, than in what generations hereafter will disclose in this same territory of rich mineral ground, it is necessary to descend the Roberts shaft. From it the long drifts extend in every direction, for distances of 200 to 600 feet, nearly all of which were dimly lighted by tallow candles; for miners are just at the present time working in nearly every portion of the mine, and the pay-roll of the Chrysolite Company numbers 250 names. It had been nearly six weeks since the reporter's last visit to the mine, yet the changes were few and unimportant. It is true many of the drifts had attained greater length, and some of them had passed some distances into heretofore unexplored or virgin ground, as the miners term it. Others, that were in barren ground the last time, showed ore in the face, while still others, which were in fine ore, had passed into iron or porphyry, having lost the ore by a sudden roll or pitch. The faces of the drifts in the aggregate, however, do not look quite as well as they did six weeks ago, but the amount of ore in sight has been greatly increased, and there can now be not less than half a million dollars' worth of ore in sight, all blocked out, and ready to stope. On the second level from the main east and west drift, there is one drift running south which shows some very fair mineral. On the north side of the east drift, there are drifts running northward, at regular intervals, beginning at the Little Chief line to a distance west of the shaft, and varying in length from 90 to 140 feet. These all show more or less good ore the entire distance. Some of these are two and three sets high, and where the ore is then lost in the roof, it is generally found by making an upraise. On the southeast sides of the shaft, there is still a great deal of fine sand, which nets from $125 to $175 per ton.

GLASS-PENDERY.—Around the Glass shaft and the Pendery shaft, large ore-bodies are exposed, while along the long drift of seven hundred feet in length, connecting the two shafts, frequent upraises made show the ore-body to exist above. The company is preparing to start up hoisting from the Pendery shaft and also to put enlarged machinery over the Glass, thus affording greater facilities for taking out the ore, when the output will be largely increased.

IRON.—The Leadville *Democrat* says: Improvements continue to be the order of the day at the Iron mine, on Iron Hill. The additional territory recently acquired, the Luella and Tucson claims, had been developed to a considerable extent, but the facilities for working the mine were wholly inadequate, and would not admit of a rapid and economical exploration and ore-product. Furthermore, the distance from the entrance of the main north incline of the Iron mine to the foot of the Tucson shaft is about 1000 feet. From the breast of the incline, a drift extends to the shaft, but is not in a condition to make a suitable avenue through which to carry the ore and waste, and in consequence it was decided more practical, as well economical in the end, to prepare the Tucson shaft for cages and place a good hoister over the same. When the Tucson was visited by the reporter, good progress had already been made in that direction, and quite a force of carpenters and laborers was engaged in pushing the work along as fast as possible. The shaft-house, which is thirty by forty-four feet, is nearly completed. When finished, it will, beyond a doubt, be the best constructed and most substantial building of the kind in the center camp. The frame generally is well braced, and the gallows-frame, though not cumbersome, is a model of strength and durability. The whole is made additionally secure by bolts, and will unquestionably last as long as there is a pound of ore in the Tucson claim to be hoisted out.

LA PLATA.—The Leadville *Herald* says of this group: All is proceeding as usual, and the production of ore averages about thirty tons per day. The property is being very extensively developed, and has large reserves of ore in the mine. It is the only instance about Leadville where an engine is placed underground for hoisting purposes, one being placed in the west main level from the tunnel, near the Rustin shaft. The shaft continues on down for some 80 feet, connecting with the lower workings. The ore is raised to the level of the tunnel, and then taken out in cars. The winze in the east drift, over which is placed a windlass, is also used for hoisting from the lower works. This will in a short time be discontinued, when connection is made with the lower workings, and then a track will be laid conveying all the ore to the Rustin shaft.

MORNING STAR.—The same paper says of this mine as follows: The main incline running to the east from the bottom of the main shaft at a depth of 250 feet, was supposed, until recently, to follow where the main resources of the mine exist. From this five cross-cuts have been run, and an immense amount of ore has been developed. The large new east shaft has been sunk and connects with the workings in the number five north cross-cut. Some months ago, however, the mining superintendent commenced exploring the ground to the southwest from the main shaft. Here he struck a fine ore-body, coming upon it suddenly when driving through porphyry, and from the first indications of mineral the ore opened to 10 feet in a day's working. This was nearly under the southeast corner of the office. The drift has been continued for over 40 feet near the Evening Star line, and has opened into a chamber of ore that bids fair to eclipse any thing ever before known in this camp. An upraise has been made directly under the old east drift from the original shaft on the Morning Star. This shaft was sunk several hundred feet to the west, and is located at the south end of the present boarding-house. The drift or incline from this followed mineral, but its pitching to so great an extent was the cause of abandoning work by this means, and the sinking of the present main shaft. Ore is exposed in the upper incline, and the upraise of 40 feet in ore made from below renders it probable that here is an ore-deposit 100 feet in thickness, or the greatest ever yet discovered in this district. The amount of tonnage of ore here developed is immense, and the probabilities of its extent are such that calculation fails.

RIO GRANDE COUNTY.

A correspondent in the Del Norte *Prospector* speaks of the mines around Summitville, as follows: Work is pushed on all of Bowen's tunnels, and in Montroy's tunnel the Judge has struck another and very promising lode. The Annie Company is doing good work under the management of Superintendent Palmer. Its tunnel is in 260 feet, and the superintendent feels highly elated over the fact that he has struck, as he believes, Bowen's extension, in which the rich ore was found last fall. One can, from the present work in the Annie tunnel, plainly hear the working of Bowen's men, about 200 feet above.

The Iowa Company's tunnel is now in 315 feet, and is being pushed night and day as fast as two shifts of No. 1 miners can push it. Considerable quartz is beginning to show in the face of the tunnel, and all hands seem to have full confidence in soon striking a vein. This company is doing the most solid, sensible improvement of any in the district, as its tunnel is started at a point near timber-line, with dump-room sufficient for thousands of tons of rock, and an excellent point from which to start a tramway; and, best of all, will strike the ore on the main veins at a depth that will show that it has ore to run a 100-stamp mill for years without the expense of hoisting and all the expensive machinery that would be required if the development had been done by sinking a shaft on the vein.

SAN JUAN COUNTRY.

ALLIED MINES.—The Ouray *Muldoon* says of this company as follows: This company owns the Norma, Hidden Treasure, Crusader, Talisman, Gertrude, and Emily mines, with four mill-sites of five acres each, comprising splendid timber and water power, all situate in Imogene Basin, Sneffels District, the distance from one end of property to the other being one and a half miles. The company owns what promises to be a heavy ore-producing property, which is situated in the Sneffels District, conceded so far to be one of the richest in the San Juan. The man-

agement is thoroughly efficient and honest, and strictly economical. No costly and unsuccessful experiments with machinery have been made. Every dollar so far has been put in improvements and development on the mines, which development has been going on all winter without interruption. All indebtedness of the company in this section has been promptly paid, and the employés are paid on the tenth of every month. The Hidden Treasure mine, which has always ranked among the best of Sneffels properties, was purchased by the company from James Mackoy; the rest of the group from Weston and Barber, who had been developing them for over three years. The purchase was effected last March; since that time, the company has been doing systematical development. The Allied mines have built a large storehouse in the basin, stocked with supplies for fifty men for fifteen months. They have also built an assay laboratory, superintendent's dwelling-house, six substantial log-houses for the miners, an equal number of blacksmith-shops, and put in cars and tracks in the longest tunnels. The ten tunnels on the property are worked to create ore-reserves on which to run a concentrator next summer. The superintendent claims that in the Norma alone, enough ore is exposed to run a 50-ton per diem concentrator for a year, the ore-body exposed being continuous for over 400 feet. On the Hidden Treasure, a chute of ore 100 feet in length was exposed in the old workings, and a cross-cut tunnel is now being run to tap the vein 200 feet (vertical) below the workings. The cross-cut tunnel on the Gertude and Una is in 170 feet. The vein shows an enormous outcrop and is believed to be still ahead. The snow drifting continually in the tunnel entrance, compelled them to shut down until spring, as the men could not stand the foul air. Horses were used to haul supplies, timbers, track iron, etc., in the basin up to the 6th of December, and teams were running to the foot of the basin until Christmas-day; thus demonstrating the fact that pack animals and vehicles can ply between the Sneffels District and Ouray the year round.

DAKOTA.

The Black Hills *Herald*, in reviewing the mines and mills around Central City, says:

While earlier developments were prosecuted, the prominent mines on the "belt" were coolly gobbled by Californians, Haggin & Tevis taking the Golden Terra and Deadwood, and the Borland party the Father de Smet, Justice, Belcher, and Golden Gate, at round figures. Permanent mills and other buildings were now projected, while extensive developments were pushed underground. The Father de Smet's 80 stamps were dropping and Deadwood and Golden Terra in turn erected 60 stamp-mills, which have since been increased to 80 each. The Caledonia came into line soon after with 60 stamps, and at the present time the Esmeralda Company is erecting 60 stamps in Blacktail Gulch. The anticipated milling facilities for the near future are one or more large mills of perhaps 200 stamps each for the De Smet and Deadwood mines; additional stamps for the Consolidated Terra-Deadwood mines, and one or more mills of good capacity for the Gopher. The whole number of stamps placed in position to date, in this vicinity, which includes Blacktail, Poorman, and Bobtail gulches, and the 60 now in the course of erection by the Esmeralda Company, is 885. The estimated cost in the early days was $1000 per stamp; some of the first mills cost much more than this figure. At low rates for freight, they can be erected now for less; but the total cost of mills alone, including other small buildings in connection, has not been below one million dollars.

CALEDONIA.—The mill started up its sixty stamps on the 18th ult., water being supplied by the Homestake Company which, since the accident and shutting down of the Golden Terra, has an abundant supply. The Terra will be idle for fifteen or twenty days, at the end of which time the Caledonia settlers will be finished and water secured for both mills.

MONTANA.

From late dates of the Butte *Miner* we condense the following:

BASIN CITY.—Work has been stopped at many of the mines here, on account of the unprecedented depth of the snow. The mercury on January 28th touched 24 degrees below zero.

MOULTON.—The shaft is now down 125 feet. A portable hoisting-engine has been placed in position and will be used until a depth of 400 feet is reached. It is the first engine of the kind used in the camp.

STEVENS.—At a depth of 56 feet in the west shaft, drifts have recently been started east and west, on a three-foot vein of $60 ore.

NEW MEXICO.

The Terra Amarilla Land Grant, a tract of about 800,000 acres, lying in New Mexico, and adjoining Colorado on the line of Conejos County, and to be traversed by the Denver & Rio Grande Railroad Company, is about to be sold to a party of California capitalists. The grant is now held by Thomas Burns and others, and is going to be very rich in mineral, and some portions are covered with splendid timber. There are several coal-fields, too, it is said, of great extent. The valley in which the grant lies is peopled by about 2000 inhabitants, who flourish among the yellow grasses of the vast fields. It is stated that the consideration of the sale is about half a million dollars, and that the company wants the land for its naturally rich possessions.

NEW YORK.

Nine new corporations filed articles of association in the County Clerk's office in this city, during the week ending the 5th inst., with a view to conducting mining operations in various parts of the country. The amount of stock proposed to be issued by them is $17,480,000.

UTAH.

From the Salt Lake *Tribune* and Park *Mining Record* of late dates we condense the following:

EMPIRE.—This mine is still idle. The Sampson pump has been brought down, but no addition has yet been made to the boiler capacity. About 300 tons of ore are lying in the ore-house.

ONTARIO.—It is reported that this company contemplates sinking a new shaft on the Last Chance ground, on the hill west of the present works. It will be larger than the present new shaft, to accommodate the monster Cornish pump which will be put in. The power of the hoisting-works that are to be ordered has not been stated, but it is expected that they will be equal to the present works. This move will open up new ground to the west, which must remain undeveloped unless another mill is erected, as the present one is easily supplied by ore from the old works, and will be for many years to come. Besides, the water will be handled by the Cornish pump, thus relieving the old works, and permitting a much greater ore output. It is safe to say that when the shaft now contemplated is finished 900 feet deep, the old works will supply ore for eighty stamps with ease.

SALT LAKE CITY.—Recent reports state that a very fine quality of black marble has been discovered within three miles of Salt Lake. The ledge is said to be 100 feet wide, and the marble is susceptible of the highest polish. We now have in this territory four kinds of marble, the white, variegated, red, similar to the Tennessee, and the black. It can be converted into building material as cheap as ordinary stone in other portions of the Union.

From late issues of our Utah exchanges we condense the following:

FRISCO.—The organization of a prospecting company of practical miners and capitalists is now agitated. It will be the purpose of this company to sink shafts in various places in and around Frisco, for determining the exact character of the ground upon which Frisco is built. The same conditions and surface showings existing in and around Leadville, Colo., surround this camp, and there is every indication of the existence of vast carbonate deposits under us.

GARFIELD.—This mine, in Elkhorn District, is prospecting by a tunnel, now in 130 feet. One excellent ledge has been run through, and several fine feeders have been cut. The vein will be cut in a short time at a depth of 100 feet. The discovery-shaft is down but twenty-five feet, water coming in at that depth. Some gray quartz filled with galena has been taken out of the discovery-shaft.

GREAT BASIN.—This mine, about one and a half miles above Stockton, has been actively worked for about two years. The incline starts from the original point of discovery of the mine, and has followed the hanging or foot-walls for quite a distance down, where the shafts and drifts and winzes and stopes are all made from and surrounded by mineral-bearing ore. The greatest pitch of the shaft is 60°. Stations are made at seven different places in the shaft, from which points drifts are run, connecting with the several workings of the mine. The first station is located at a depth of 260 feet from the surface; the second, 320; the third, 370; the fourth, 420; the fifth, 450; the sixth, 670; the seventh, about 800 feet. Below the 800-foot level, a shaft or winze is still sinking. The ore is easily worked—the brown and gray carbonates being soft and requiring but very little if any blasting. The ore in the second level is said to be of an average of four feet; in the third level, there must be quite three feet; the fourth level displays a large quantity of ore; in the fifth level, the ledge is wide; and in the sixth and seventh levels, we may say there is a continuous body of ore. The richest of the ore found is in the drifts and stopes of these lower levels.

PROPOSALS AND SALES.

For the benefit of many of our readers, we compile weekly such proposals and solicitations for contracts, etc., as may be of interest. The table indicates the character of proposals wanted, the full name and address of parties soliciting, and the latest date at which they will be received:

Furnishing and Delivering 6000 Cubic Yards of Sand and 2000 Cubic Yards of Cobble-stone for Street Repairs; Commissioner of City Works, Room 15, Municipal Department Building, Brooklyn	Feb. 12, 1881.
Erecting a New County-House on the County Farm, in the City of Troy; M. F. Cummings, Architect, Times Building, Troy, N. Y.	" 14, "
Erecting Frame Buildings necessary to form Two Ranges for Passing the Horseshoe Shoal, Delaware River; William F. Raynolds, Colonel Corps of Engineers, 532 Walnut street, Philadelphia, Pa.	" 14,
Supplying the Camden Water Department during the year 1881 with Water Pipe, and the necessary Branches, Curves, Sleeves, and all special Castings; also, 3, 4, 6, 8, 10, and 12-inch Stop-Valves; also, 4½-inch Fire Hydrants complete, with Steamer and Hose Outlet; Camden Water Department, City Hill, Philadelphia, Pa.	" 14, "
Furnishing Bricks, Brick-Work, and Lumber required during the year 1881; furnishing and setting in place, complete, all the Rolled, Wrought, and Cast-Iron required for the whole of the Roofs south of the Center Pavilions of the East and West Fronts (except the roofs of the two corner pavilions and exterior fronts of the wings and curtains); also, for all Dressed Granite and Sand stone to completeinside finish of Conversation Hall of Councils; also, for all Slating required for the southern half of the Building; Commissioners of Public Buildings, Penn Square, Philadelphia, Pa.	" 17, "
Furnishing Gas or other Illuminating Material, and Keeping in Order the Public Lamps in the Public Buildings, Baths, etc., and in the Streets, Avenues, Piers, and Places in the City of Brooklyn, during the year 1881; Department of City Works, Municipal Department Building, Brooklyn	" 17, "
Grading, Macadamizing, Graveling, and Masonry of Ross Avenue, Mill-Creek Township; Mr. S. Cappeller, County Auditor, Commissioner's Office, Hamilton County, O.	" 19, "
Furnishing and Laying or Setting Pipe-Valves and Hydrants at the Water-Works of the City of Springfield; Trustees of Water-Works, Bowman's Building, Springfield, O.	" 22, "
Furnishing and delivering at the Jeffersonville Depot, the following articles: Army-Wagon Axles, Spring-Wagon Axles, Ambulance Axles, Dump-Carts, Sand-Boards, Bolsters, King-Bolts, Tongue-Bolts, Hounds, Linch-Pins, Coupling-Poles, Tongues and Wheels for Army Wagons, Ambulance Tongues, Riding-Bridles, Head-Halters, Cart-Harness, Riding-Saddles, Wagon-Saddles, Coupling-Straps, Horse-Blankets, Horse and Mule Collars, Large Paulins and Army-Wagon Covers; James A. Ekin, Deputy Quartermaster-General U. S. Army, Jeffersonville, Ind.	" 23,
Erection of a New City Hall in the City of Albany. Specifications, etc., furnished on application to H. H. Richardson, Architect, 91 Hawk street, Albany; Commissioners of Building, Albany, N. Y.	March 1, "
Furnishing and Delivering at Port Oram, Morris Co., N. J., the necessary Iron Work for a Magazine Building, consisting of about 122,508 pounds Wrought-iron Beams, Rods, Bars, Angles, Channel, and Plate, with the necessary Bolts, Washers, and Pins, and about 26,782 pounds Iron Castings. Proposals for either or both classes of the Iron above mentioned will be received; F. H. Parker, Major of Ord., Commanding; Office Piccatinny Powder Depot, Dover, N. J.	" 3, "
Designs for a Cotton Exchange to be erected in the City of New Orleans; the sum of $1000 will be paid for the Drawings chosen, the Association reserving the right to reject any and all plans submitted. A circular giving particulars and explanation, together with ground-plan and sketch-plans suggestive of divisions of the various floors, etc., will be furnished on application to Henry G. Hester, Secretary of the New Orleans Cotton Exchange, New Orleans, La.; Thomas D. Miller, Chairman Committee on Buildings.	" 15, "
Furnishing Materials and Labor necessary to the Construction and Final Completion of the Water-Works of the City of Springfield; Trustees of Water-Works, Bowman's Building, Springfield, O.	" 16, "
Constructing the Sunflower Extension of the Greenville, Columbus & Birmingham Railroad from Stoneville to the Sunflower River, twenty miles; Bids will be received separately for the Grading, Bridging, Crossties, and laying Track, or for the entire Work, the Iron alone being furnished; H. T. Irish, Secretary, Greenville, Miss	" 21, "
Designs for Statuary to be placed on the Four Pedestals at Blackfriars Bridge: the designs may be submitted either by drawings or models; if by drawings, to be either in chalk, charcoal, pencil, ink, or sepia; if by models, in clay, plaster, or other convenient material; the designs in either case to be prepared to a scale of one inch and a half to the foot; Architect's Office, Guildhall, London, England	" 21, "
Monument to be Erected in Rome for late Victor Emanuel II., First King of Italy; President of the Royal Commission, Cairoli; and the Secretary of the Royal Commission, etc., Rome, Italy	Sept. 21, "

Draining Lake Okeechobee in South Florida.—A contract has recently been agreed upon between the authorities of Florida and I. Coryel, of Jacksonville, and A. B. Linderman, representing capitalists of Philadelphia and the Pacific coast, to drain Lake Okeechobee, in South Florida. If the scheme is carried out, 12,000,000 acres of the best sugar land in the world will be reclaimed. The territory reclaimed will include the celebrated everglades, and will be in extent twice as large as the State of New Jersey. This is the largest contract on record, and when completed Florida can produce more sugar than the United States now consumes.

Central & South American Telegraph Company.—This company filed articles of incorporation recently at Albany, N. Y. Capital, $5,000,000. The lines are to run from New York to Texas, thence to Mexico, thence to South America. Jonathan Edwards, James A. Scrysmer, and Alfred Pell, all of New York, are the stockholders.

Bridge over the Missouri River at Bismarck.—The arrangements for building a bridge over the Missouri River at Bismarck, by the Northern Pacific RR. Company, have been perfected. Mr. George S. Morrison, builder of the Plattsmouth, Mo., bridge over the Missouri, has been appointed engineer in charge, with L. Parkhurst for assistant, and the work is to be begun as early in the spring as possible. The bridge will be 2400 feet long, with three river spans each of 400 feet, and the channel span 75 feet above high-water mark. The piers will be of granite quarried near Aldrich, thirty-seven miles west of Brainerd, and their foundations will be laid on caissons in the hard pan, excavations being made therefor by the pneumatic process. The whole cost of the bridge is roundly estimated at $800,000, and it is intended to have it completed within a year from beginning the work.

FINANCIAL.

Gold and Silver Stocks.

NEW YORK, Friday Evening, Feb. 11.

There has been a very active market during the week under review, and prices are higher in many instances. The Leadville stocks have attracted most attention, continued driving of dead-work having developed something new in several mines. It is probable, however, that the "boom" in these stock is overdone, and a reaction will soon follow. The Tuscarora stocks have taken quite a position in the market from the very beginning of a mining business in the East, and through them the public has been "milked" over and over again, is being so now, and will probably continue to be. The Comstock shares are receiving a fair amount of attention at declining prices. The market closed very strong.

Amie has been very active, and, at the same time, strong; the sales aggregate 194,350 shares, at 45@60c. Bassick only records 100 shares at $12.25, and Barbee & Walker 100 shares at $4. Belle Isle has been quiet but strong, the sales aggregating 985 shares, at 55@75c. Belcher records sales of 200 shares at $1.20. Bodie Consolidated has been fairly active and steady, the sales amounting to 1115 shares at $5.75@$6. Breece has been dealt in to the extent of 2100 shares at $1.40@$1.20. California has been quite active but weak, the sales aggregating 8635 shares at $1.10@90c. Caribou has only been dealt in to the extent of 250 shares at $3. Chrysolite has been quite active, irregular, but ultimately strong; the sales aggregate 16,450 shares at $5.75@$6.88. This stock has sympathized with Little Pittsburg, although the policy of the management is to thoroughly and systematically develop the mines, and no effort will be made to force production or make a show. Climax has joined in the general Leadville "boom," and records sales of 37,300 shares at 47@67c. Consolidated Virginia has been exceedingly active, slightly irregular, with a tendency to strength; the sales aggregate 16,125 shares at $1.30@$1.63. Copper Knob has had a moderate business at steady prices, the sales amounting to 19,700 shares at 8@6c. Deadwood has been very quiet, with sales of but 100 shares at $12¼. Dunkin has had a moderate business at prices a little strong; the sales aggregate 3250 shares at $1.25@$1.55. Eureka has had a liberal business at strong prices, the sales amounting to 505 shares at $22@$23¼@$22½. Excelsior only records 150 shares at $6. Father de Smet is attracting considerable attention at the present time; the sales, however, have been small, amounting to but 225 shares at $8.25@$8.75@$8.50. Findley has been quiet and steady, the sales aggregating 1700 shares at 25@26c. Gold Stripe has been quiet and steady, with sales of 1600 shares at $2.60@$2.65. Grand Prize has had a moderate business at strong prices, the sales amounting to 1585 shares at $1.60@$2. Great Eastern has been fairly active and steady, with sales of 7800 shares at 21@22c. Green Mountain has been active and very irregular, with a strong upward, tendency, however; the sales aggregate 6020 shares at $6.13@$5.50@$7. Hibernia has been very active and strong; the sales aggregate 162,750 shares at $1@$1.60@$1.15. Homestake has had a liberal business at well-maintained prices, the sales aggegating 700 shares at $25¾@$26½. Horn-Silver only records 345 shares at $13.25@$12.75. Hukill has had a moderate business at stronger prices, the sales amounting to 7000 shares at $1.45@$1.70@$1.55. On Saturday and to-day Independence was dealt in to the, extent of 700 shares at 44@47c. La Plata records sales of 200 shares at $8.75. Leadville has been quiet, although stronger, the sales amounting to 4225 shares at 53@60c. Leeds was dealt in to the extent of 100 shares at 25c. Little Chief was quite active and very strong, the sales amounting to 55,962 shares at $1.15@$2.05. Little Pittsburg has been the real feature of the market. It records a very large business, quite irregular prices, and an advance over a week ago. The sales amount to 71,155 shares at $5@$8.25@$8.13. Moose has been liberally dealt in at declining prices, the sales amounting to 17,125 shares at $1.65@$1.50. Moose Silver, however, has been quiet but strong, the sales amounting to 1800 shares at $1.85@$2.05. New York & Colorado has been quiet, with sales of 600 shares at $1.10@$1. North Belle Isle records sales of 500 shares at 42c. Ontario has only been dealt in to the extent of 20 shares at $36@$35½. Ophir has been quite active and still declining; the sales amount to 2901 shares at $4.90@$4.38. Plumas records 100 shares at $1.40. Rising Sun has had a liberal business at stronger prices, the sales aggregating 11,200 shares at $2.90@$3.25. Robinson Consolidated records sales of 200 shares at $7.50@$7.75. Stormont, under a moderate business, has been weak; the sales aggregate 4425 shares at $2.80@$2. The miners of this company are reported to be upon a strike against a reduction of their wages. If the company is successful in its efforts, it should add greatly to the value of the stock. Sierra Nevada records sales of 1040 shares at $6.13@$5.38. Spring Valley has been dealt in to the extent of 800 shares at $3.50@$3.25. Standard has been quite active and very strong, the sales amounting to 6710 shares at $23¾@$26¼.

Alta-Montana records a moderate business at steady prices, the sales amounting to 3200 shares at $1.85@$1.80. Alice has been dealt in to the extent of 850 shares at $6.50@$7. American Flag has been quiet and steady, the sales amounting to 2700 shares at 25@24c. Bonanza Chief has been quiet, the sales amounting to 5600 shares at 33@31c. Bull-Domingo has been dealt in to the extent of 4200 shares at $3.40@$4. Boulder Consolidated has had a moderate business at strong prices, the sales aggregating 10,000 shares at 50@57c. Boston Consolidated has been active and weak, with sales of 43,920 shares at $1.15@78c. Buckeye has been steady, with sales of 12,800 shares at 25@22c. Bulwer has been quiet and steady, with sales of 500 shares at $2.25@$2.15. Calaveras has been steady, with sales of 22,900 shares at 21@26c. Caledonia, B. H., has been dealt in to the extent of 500 shares at $1.20@$1.10. Central Arizona has been active and quite strong, the sales aggregating 10,900 shares at $5@$7. Cherokee has been quiet and steady, with sales of 375 shares at $1.70@$1.80. Cosette, under a moderate business, has weakened, the sales aggregating 1300 shares at $2@$1.85. Consolidated Imperial has been quiet and steady, with sales of 2800 shares at 20@18c. Consolidated Pacific has been quiet and steady, with sales of 1500 shares at 83@95@85c. Crowell has been dealt in to the extent of 4000 shares at 6@5c. Dahlonega has been quiet and steady with sales of 5200 shares at 11@10c. Dunderberg has been dealt in to the extent of 300 shares at $1.30@$1.25. Durango has had a moderate business at steady prices, the sales aggregating 16,300 shares at 15@13c. Goodshaw has been active but weak; the sales aggregate 21,300 shares at 65@48c. Granville has been quiet with sales of 5200 shares at 6@5c. Iron Silver has been quite active and, for a time, strong. The legal complications of this company act as a depressing effect. The sales aggregate 8600 shares at $3.25@$3.60@$3.35. Lacrosse records sales of 3800 shares at 27@28c. Lucerne has been dealt in to the extent of 3100 shares at 11@13c. The Mariposa stocks have attracted considerable attention by the advance they have made. They will probably, later on, attract an equal amount of attention by the decline they will make; the sales aggregate 2037 shares of Preferred at $3.50@$9, and of Common, 9436 shares at $3@$7. May Belle has been dealt in to the extent of 100 shares at 21c. Mineral Creek, under a moderate business, has been weak, the sales aggregating 7000 shares at 42@35c. Miner Boy has been moderately dealt in at, for a time, stronger prices, but weakening at the end; the sales aggregate 13,200 shares at 79@90@79c. Mexican has had a moderate business at weak prices at the close; the sales amount to 1040 shares at $5.50@$4.95. Navajo, under a moderate business, has continued to weaken; the sales amount to 2050 shares at $2.75@$2.25. North Standard has been quite active but very weak, the sales aggregating 93,800 shares at 43@25c. The Quicksilver stocks show quite an improvement and a very liberal business. The sales of Preferred amount to 10,850 shares at $57@$63½, and of Common 13,200 shares at $15@$19¼ Rappahannock has been quiet and steady, with sales of 6600 shares at 14@13c. Red Elephant has been irregular and strong at the close, with sales of 6800. shares at 30@40c. Silver Cliff has been very active and strong, the sales aggregating 22,355 shares at $4.60@$5.63. Silver Nugget has been active but very weak, the sales amounting to 29,990 shares at 12@8c. South Bodie has been quiet and a little stronger, the sales amounting to 1600 shares at 26@30c. South Hite, under a moderate business, has been a little strong, the sales amounting to 2500 shares at 32@39c. Sutro Tunnel has been quiet but stronger, the sales amounting to 6250 shares at $1@$1.75@$1.25. Tioga records sales of 200 shares at 65c. Tip Top records sales of 150 shares at $2@$2.15. South Bulwer records sales of 900 shares at 35@32c. Tuscarora has had a moderate business at weak prices, the sales amounting to 3600 shares at 41@35c. Unadilla, under a moderate business, has been steady, the sales amounting to 11,500 shares at 15@16c. Union Consolidated has had a very liberal business at weak prices, the sales amounting to 2390 shares at $8.63@$7.25. Vandewater has been quite active but weak, the sales amounting to 49,950 shares at 70@50c. Willshire has had a moderate business at irregular prices, the sales aggregating 8245 shares at $1.25@$1.45@$1.30. Hortense has been dealt in to the extent of 4600 shares at 55@86@65c.; and Original Keystone, 200 shares at $1.50@$1.

Mr. L. V. Deforeest, No. 70 Broadway, under date of February 11th, 3 P.M., reports the current quotations of unlisted stocks as follows:

	Bid.	Offer'd		Bid.	Offer'd
Barcelona	$1.20	$1.25	Native Silver	....	.60
Big Pittsburg	2.00	2.65	New Philadel	....	.50
Breece	1.15	1.20	North Hite	....	$0.75
Bald Mountain	.08	.10	Patagonia	$0.50	.75
Carbonate Hill	.25	.45	Rico	....	1.25
Empire, Utah	....	$2½	Sacramento	....	2.00
Grand View	....	.70	Santa Cruz	.50	.75
HighlandChief	....	8.00	Sir Rodr'k Dhu	.15	.25
Con. Arizona	1.90	2.00	Stormont	2.00	$2¼
Julian	1.00	....	Silver Nugget	.10	.11
Mack Morris	....	4.00	Trinity	....	1.00
May Flower	.40	.45	Van de Water	.51	.52
Mohave	....	.30			

Mr. E. A. Wood has been elected Secretary of the New York Mining Stock Exchange, *vice* Mr. J. F. Scott, resigned.

OFFICIAL LETTERS.

Allied Mines.—At the annual meeting of the stockholders of the Allied Mines, held February 7th, the following Board of Trustees was elected for the ensuing year: Senator Henry W. Blair, of New Hampshire; the Hon. O. H. Browning, of Illinois; ex-Senator A. H. Cragin, of New Hampshire; James A. Cowing, Benjamin F. Ham, Josiah D. Ripley, Orrin Skinner, Harvey M. Munsell, Thomas F. Wentworth, of New York. Of the above named all but Senators Blair and Cragin and Mr. Cowing were members of the old board, and it is considered that the accession of this new element offers a fresh guarantee of the strength of the corporation.

Alta-Montana.—It is stated that the expenditures for labor and material of this company average, the year round, $1000 per day, while the bullion product is but little short of $2000 per day, which will be largely increased by their new appliances to be added in the spring. This company has recently erected steam hoisting and pumping works on its Comet mine, at a cost of $25,000. This mine, at a depth of over 100 feet, shows an ore-body 10 feet wide and averaging 50 ounces in silver, with 40 per cent lead to the ton. Its Alta mine is open to a depth of 500 feet, and is producing ore going over 100 ounces in silver to the ton.

Barbee & Walker.—A telegram received from the superintendent states that the engine has been repaired and started again, and that the battery assays are improving.

Bodie Consolidated.—The superintendent reports for last week: Shipment, $8373; total value of ore is $92 per ton. Millet vein not looking so well; rich ore lies in bunches like Burgess.

Boston Consolidated.—A recent report telegraphed by the Bodie agent of the Mining Associated Press, says: The mine is being developed in a thorough and scientific manner. Work is now advancing on the 300-level, and the north drift, which has been driven 300 feet on the foot-wall of the vein, is expected, from the present favorable character of the ore formation, to strike the main ledge within a few feet. The workings have exposed large bodies of fair milling with occasional seams of high-grade ores, and the opinion is expressed that the mine will become one of the leading bullion-producers on the Bodie lode.

Cosette.—It is reported that large bodies of ore are exposed in the Cosette mine, and that work will be resumed probably in a short time, operations having

GENERAL MINING STOCKS.

Dividend-Paying Mines.

NAME AND LOCATION OF COMPANY.		Feet on Vein.	Capital Stock.	SHARES. No.	SHARES. Par Val	ASSESSMENTS. Total levied to date.	ASSESSMENTS. Date and amount per share of last.	DIVIDENDS. Total paid to date.	DIVIDENDS. Last Dividend.	HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE. Feb. 5. H.	Feb. 5. L.	Feb. 7. H.	Feb. 7. L.	Feb. 8. H.	Feb. 8. L.	Feb. 9. H.	Feb. 9. L.	Feb. 10. H.	Feb. 10. L.	Feb. 11. H.	Feb. 11. L.	SALES.
Amie Con. s. L.	Col.	.....	5,000,000	500,000	10	*	.....	305,000	May. 1880	10	.51	.45	.56	.50	.55	.50	.57	.53	.58	.54	.60	.56	191,350
Argenta, s.	Nev.	1,500	10,000,000	100,000	100	110,000	Nov. 1880	40,000	Feb. 1880	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Barbee & Walker.	Uth	.....	1,000,00	100,000	10	*	.....	60,000	Nov. 1880	10	.....	.....	.....	.....	.....	.....	4.00	.....	.....	.....	.....	100
Bassick, G. s.	Col.	.....	10,000,000	100,000	100	*	.....	25,000	Feb. 1880	25	12.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belle Isle, s.	Nev.	1,500	10,000,000	100,000	100	30,000	Feb. 1880	300,000	Dec. 1879	25	.55	.....	.65	.....	.....	.....	.75	.....	.75	.70	.75	.70	985
Belcher, G. s.	Nev.	1,040	10,400,000	104,000	100	2,198,000	Nov. 1880	75	15,397,200	Apr. 1876	75	.....	.....	.....	.....	.....	1.20	.....	.....	.....	.....	200
Bobtail, G.	Col.	2,500	1,136,630	227,326	5	*	.....	.....	135,630	Sept. 1879	1f	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bodie Cons., G	Cal.	.....	10,000,000	100,000	100	75,000	May. 1879	1 00	1,200,000	Mar. 1880	25	6.00	.....	.....	.....	6.00	.....	6.00	5.75	6.00	.....	.....	1,115
Breece	Col.	.....	5,000,000	200,000	25	.....	.....	2,100	Feb. 1880	.....	.....	.....	.....	.....	1.30	.....	1.40	1.30	.....	.....	1.20	.....	2,100
California, G. s.	Nev.	600	54,000,000	540,000	10	.....	.....	31,320,000	Dec. 1879	50	1.10	1.05	.95	.90	1.05	.90	1.00	.90	1.00	.....	1.05	.95	8,635
Calumet & Hecla, C.	Mch	.....	2,500,000	100,000	25	200,000	.....	18,250,000	Feb. 1880	5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Caribou Con., G	Col.	1,400	1,000,000	100,000	10	*	.....	50,000	Mar 1880	10	.....	.....	.....	.....	3.00	.....	.....	.....	3.00	.....	.....	250
Chrysolite, s. L.	Col.	.....	10,000,000	200,000	50	*	.....	1,100,000	Apr. 1880	50	6.25	5.75	6.50	6.38	6.63	6.38	6.63	6.38	6.88	6.38	6.88	6.25	16,450
Climax, s. L.	Col.	.....	2,000,000	200,000	10	*	.....	180,000	Aug. 1880	30	.50	.47	.57	.48	.55	.53	.61	.53	.62	.57	.67	.62	37,300
Cons. Virginia, G. s.	Nev.	710	54,000,000	540,000	100	411,200	June 1873	3 00	42,930,900	Aug. 1880	50	1.50	1.35	1.45	1.30	1.55	1.45	1.50	1.35	1.63	1.45	1.63	1.45	16,125
Copper Knob.	N. C.	.. ..	500,000	500,000	1	*	.....	15,000	Nov. 1880	02	.08	.....	.08	.....	.08	.....	.08	.....	.08	.07	.07	.06	19,700
Crown Point, G. s.	Nev.	600	10,000,000	100,000	100	2,523,370	Dec. 1880	0 50	11,588,000	Jan. 1875	2 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Deadwood Terra G.	Dak	.....	5,000,000	200,000	25	.....	.....	.....	†10,000	Jan . 1881	25	.....	.....	.....	.....	.....	.....	12¼	.....	.....	.....	100
Dunkin	Col.	.....	5,000,000	200,000	25	.....	.....	.....	120,212	Jan.. 1881	7½	1.30	1.25	1.45	1.40	.....	.....	1.45	1.40	1.55	1.45	3,250
Eureka Cons., G. s. L.	Nev.	.....	5,000,000	50,000	100	100,000	May. 1876	1 00	4,530,000	Jan.. 1881	50	.....	.....	.....	.....	23.00	22.00	23¼	22½	23¼	23	22½	55
Excelaior W'f'r & M. Co	Cal.	525 acres	10,000,000	100,000	100	.....	.....	850,000	Sept. 1880	25	.....	.....	.....	.....	6.00	.....	.....	.....	.....	.....	6.00	.....	150
Father de Smet, G.	Dak	.....	10,000,000	100,000	100	.....	.....	240,000	July 1880	30	.....	.....	8.25	.....	8.75	8.50	.....	.....	.....	.....	.....	.....	225
Findley, G.	Geo.	.....	200,000	200,000	1	*	.....	8,000	May. 1879	1c	.25	.....	.....	.....	.26	.....	.26	.....	.....	.....	.....	.....	1,700
Freeland	Col.	.....	5,000,000	200,000	25	*	.....	50,000	May. 1880	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Gold Stripe	Cal.	.....	1,500,000	150,000	10	.....	.....	145,000	Dec.. 1880	15	2.60	.....	2.60	.....	2.60	.....	2.65	2.60	2.65	.....	2.65	.....	1,600
Gould & Curry, G. s.	Nev.	612	10,000,000	100,000	100	3,206,000	Aug. 1880	50	3,893,800	Oct. 1870	10	00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Prize, s.	Nev.	1,500	10,000,000	100,000	100	225,000	Dec.. 1879	0 75	450,000	Sept. 1880	0 25	1.70	1.60	1.65	1.60	.....	.....	1.85	.....	1.90	.....	2 00	1.90	1,585
Great Eastern, G.	Dak	1,200	300,000	300,000	1	*	.....	16,000	July. 1880	01	.22	.21	.22	.....	.22	.21	.22	.....	.22	.....	.22	.....	78 0
Green Mountain, G.	Cal.	4,350	1,250,000	125,000	10	*	.....	118,750	Jan.. 1881	05	6.13	.....	6.00	5.88	5.83	.....	6.13	5.50	6.50	6.00	7.00	6.50	6,030
Hale & Norcross, G. s.	Nev.	400	11,200,000	112,000	100	3,530,000	Dec . 1880	75	1,598,000	Apr. 1871	5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hibernia	Col.	.....	7,500,000	300,000	25	.....	.....	60,000	Jan . 1881	10	1.30	1.00	1.55	1.25	1.60	1.35	1.50	1.35	1.45	1.25	1.45	1.35	192,750
Homestake, G.	Dak	.....	10,000,000	100,000	100	200,000	Apr. 1878	1 00	870,000	Jan.. 1881	30	26½	.....	26¼	25¾	26	.....	26½	.....	.....	.....	.....	700
Horn-Silver, s.	Uth.	.....	10,000,000	400,000	25	*	.....	200,000	Jan.. 1880	25	.....	.....	.....	.....	13.25	.....	.....	.....	.....	.....	13	12.75	345
Hukill, G. s.	Col.	3,288	1,000,000	200,000	5	*	.....	210,000	Dec.. 1878	10	1.45	.....	1.50	1.45	1.70	1.50	1.65	1.60	1.65	1.50	1.55	.....	7,000
Independence, s.	Nev.	1,500	10,000,000	100,000	100	135,000	Apr.. 1880	0 25	225,000	Sept. 1879	25	.44	.....	.....	.....	.....	.....	.....	.....	.....	.47	.....	700
Indian Queen	Nev.	.....	250,000	125,000	2	.....	.....	240,000	Jan. 1881	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
La Plata, s.	Col.	.....	2,000,000	200,000	10	*	.....	270,000	Jan.. 1881	7½	3.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 0
Leadville Cons., s. L.	Col.	.....	2,000,000	200,000	10	*	.....	150,000	Jan. 1880	15	.53	.....	.55	.....	.57	.....	.60	.56	.60	.....	.60	.59	4,225
Leeds, s.	Uth.	3,000	6,000,000	60,000	100	27,000	Nov. 1880	15	78,000	Oct.. 1878	15	.....	.....	.35	.....	.....	.....	.....	.....	.....	.....	.....	100
Leopard, L. G. s.	Nev.	1,500	5,000,000	50,000	100	372,500	Apr.. 1880	10	162,500	Dec. 1876	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Chief, s. L.	Col.	.....	10,000,000	200,000	50	*	.....	700,000	Aug. 1880	50	1.20	1.15	1.75	1.25	1.70	1.45	1.75	1.60	1.65	1.60	2.05	1.70	55,962
Little Pittsburg, s. L.	Col.	30 acres.	20,000,000	200,000	100	.....	.....	1,350,000	Mar.. 1880	50	6.13	5.00	8.25	5.75	8.00	6.75	7.88	6.88	7.75	6.75	7.15	7.00	71,155
Martin White, s.	Nev.	22,900	10,000,000	100,000	100	825,000	Dec.. 1880	25	99,000	July. 1879	50	.....	.....	.....	.....	.....	.....	.55	.50	.....	.....	.....	20
Moose, s.	Col.	39,000	2,000,000	200,000	10	*	.....	.....	550,000	Mar. 1878	25	1.65	1.50	1.65	1.50	1.65	1.55	1.60	1.55	1.50	.....	1.65	1.55	17,125
Do. new stock	Colo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.85	.....	1.90	.....	1.95	.....	.....	.....	2.05	2.00	.....	.....	1,800
Napa Cons., G.	Cal.	.....	10,000,000	100,000	100	.....	.....	140,000	Nov. 1880	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.00	.....	600
N. Y. & Colorado, G.	Col.	.....	1,000,000	50,000	20	*	.....	25,000	July. 1879	10	.....	.....	1.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Northern Belle, s.	Nev.	1,000	5,000,000	50,000	100	.....	.....	1,735,000	Jan.. 1881	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
North Belle Isle.	Nev.	1,500	10,000,000	100,000	100	25,000	Feb.. 1880	15	15,000	Sept. 1880	15	.....	.....	42	.....	42	.....	42	.....	.....	.....	.....	500
Ontario, s.	Uth.	3,000	10,000,000	100,000	100	.....	.....	3,150,000	Jan . 1881	50	.....	.....	.....	.....	36.00	35½	.....	.....	.....	.....	.....	.....	20
Ophir, G. s.	Nev.	675	10,080,000	100,800	100	2,991,800	Nov. 1880	1 00	1,603,200	Jan.. 1880	1 00	4.75	.....	4.80	.....	4.90	.....	4.63	4.38	4.50	4.38	4.85	4.38	2,901
Ore Knob, c.	N. C.	1,600 acs.	1,500,000	150,000	10	*	.....	.....	173,300	Sept. 1880	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Plumas, G.	Cal.	.....	1,000,000	100,000	10	715,000	.....	.....	151,000	July 1879	8	.....	.....	.....	.....	1.40	.....	.....	.....	.....	.....	.....	100
Raymond & Ely, G. s.	Nev.	5,000	12,000,000	120,000	100	955,000	Aug. 1880	2 00	3,075,000	Sept. 1873	3 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rising Sun.	Cal.	.....	750,000	150,000	5	*	.....	.....	.....	Nov. 1880	15	.....	.....	.....	.....	3.05	2.95	3.10	2.90	3.20	3.05	3.25	3.15	11,250
Robinson Cons.	Col.	.....	10,000,000	200,000	50	*	.....	175,000	Sept. 1880	50	.....	.....	.....	.....	7.50	.....	7.75	.....	.....	.....	.....	.....	200
Starr Grove, s.	Nev.	.....	2,000,000	200,000	10	.....	.....	60,000	Jan.. 1881	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Stormont, s.	Uth.	.....	150,000	150,000	1	*	.....	135,000	Nov. 1880	30	2.75	.....	2.75	.....	.....	.....	.....	.....	2.88	2.70	2.50	2.00	4,425
Sierra Nevada, G. s.	Nev.	3,650	10,000,000	100,000	100	1,453,000	Jan . 1881	1 00	102,000	Jan. 1871	1 00	.....	.....	6.13	.....	.....	.....	6.00	.....	6.13	5.50	5.88	5.38	1,040
Silver King, s.	Ariz	1,500	10,000,000	100,000	100	.....	.....	.....	525,000	Jan.. 1881	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Spring Valley.	Cal.	.....	200,000	200,000	100	.....	.....	.....	50,000	Jan. 1881	25	3.25	.....	3.50	.....	.....	.....	3.25	.....	3.30	.....	.....	8 0
Standard, s.	Cal.	.....	10,000,000	100,000	100	50,000	July 1878	1 00	2,475,000	Feb.. 1881	75	24¼	23¾	26	24¼	26	25⅛	26¼	25⅛	26	25½	23	.....	6,710
Tombstone, s.	Ariz	.....	12,500,000	50,000	25	*	.....	.....	550,000	Feb . 1881	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yellow Jacket, G. s.	Nev.	1,200	12,000,000	120,000	100	3,978,000	Oct.. 1880	1 00	2,184,000	Aug. 1871	2 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Non-Dividend-Paying Mines.

Alta	Nev.	600	10,800,000	108,000	100	1,283,000	Aug. 1880	0 50	.....	.....	.....	.....	.....	.....	1.35	.....	1.35	1.30	1.30	.....	.....	.....	3,200
Alta-Montana	Mon	.....	5,000,000	500,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 80	.....	1.80	.....	.....
Alice	Mon	.....	.....	.....	.....	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.50	.....	7.00	6.50	850
Am. Flag, G.	Col	5,300	1,250,000	125,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	24c	.....	.....	22c	.....	25c	24c	.....	.....	2,700
Auburn & Rock Creek.		..	5,000,000	5 0,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battle Creek	Dak.	.....	5,000,000	200,000	25	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bechtel Con., G.	Cal.	.....	10,000,000	100,000	100	162,750	Dec. 1880	0 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belvidere, G.	Cal.	1,500	6,000,000	60,000	100	147,000	Dec. 1880	0 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Best & Belcher, G. s.	Nev.	545	10,080,000	100,800	100	992,990	Dec. 1880	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bald Mountain	Colo	.....	10,000,000	100,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bonanza Chief	Mon	.....	1,000,000	1,000,000	1	*	.....	.....	.....	.....	.....	.....	.....	.....	32c	31c	32c	.....	32c	31c	32c	.....	31c	.....	5,6 0
Bull-Domingo	Colo	.....	10,000,000	200,000	50	*	.....	.....	.....	.....	.....	.....	.....	.....	3.65	3.60	3.65	3.25	3.55	3.40	3.50	.....	3.35	3.75	4,2 0
Boulder Con.	Colo	.....	.....	.....	5	*	.....	.....	.....	.....	.....	.....	.....	.....	55c	51c	.....	.....	57c	50c	55c	44c	.....	.....	10,000
Boston Con.	Cal.	.....	10,000,000	100,000	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	1 15	7[illegible]	1.15	1.05	1.00	90c	92c	85c	88c	78c	9 c	79c	43,920
Buckeye	Col.	.....	2,000,000	400,000	5	*	.....	.....	.....	.....	.....	.....	.....	.....	25c	24c	25c	.....	24c	.....	24c	23c	.....	.....	24c	22c	15,500
Bullion, G. s.	Nev.	943½	10,000,000	100,000	100	352,000	Dec. 1880	1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bulwer, G.	Cal.	.....	10,000,000	100,000	100	26,000	Dec.. 1877	50	.....	.....	.....	.....	.....	.....	2 2[illegible]	.....	.....	2.25	.....	2.25	2.15	.....	.....	.....	100
Bye and Bye.	Ariz	.....	1,000,000	100,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Calaveras, G.	Cal.	2,600 acrs	500,000	500,000	1	*	.....	.....	.....	.....	.....	.....	.....	.....	22c	.....	22c	21c	22c	.....	23c	21c	20c	23c	22,900
Caledonia																									
Cal., B. H., G.	Dak.	.....	10,000,000	100,000	100	375,000	Oct.. 1880	0 50	.....	.....	.....	.....	.....	.....	.....	.....	1.10	1.10	.....	.....	.....	.....	500
Central Arizona, s.	Ariz	.....	12,000,000	100,000	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.00	.....	5¾	5.00	6¾	5¼	7.00	6.00	6¾	6¼	10,900
Cherokee, G.	Cal.	.....	15 0,000	150,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.75	.....	1.85	1.70	1.80	.....	1.80	.....	1,375
Columbia Con., G. s.	Nev.	.....	5,000,000	100,000	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cosette	N. M.	.....	100,000	10,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.00	1.85	1.90	1.85	1.85	.....	.....	.....	1,3 0
Cons. Imperial, G. s.	Nev.	468	50,000,000	500,000	100	1,275,000	July. 1880	0 10	.....	.....	.....	.....	.....	.....	.....	.....	10c	.....	10c	10c	10c	.....	10c	.....	2,800
Con. Pacific, G.	Cal.	1,400	6,000,000	60,000	100	90,000	July. 1880	0 50	.....	.....	.....	.....	.....	.....	86c	85c	.....	.....	15c	90c	91c	85c	.....	.....	1,500
Crowell	N. C.	.....	500,000	500,000	1	*	.....	.....	.....	.....	.....	.....	.....	.....	5c	.....	6c	.....	.....	.....	5c	.....	5c	.....	4,000
Dahlonega, G.	Ga.	.....	250,000	250,000	1	*	.....	.....	.....	.....	.....	.....	.....	.....	11c	10c	10c	.....	10c	.....	.....	.....	10c	.....	5,2 0
Dunderberg	Colo	.....	1,500,000	150,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	1.25	.....	1.30	1.25	.....	.....	.....	.....	.....	.....	300
Durango	Dak.	.....	500,000	500,000	1	*	.....	.....	.....	.....	.....	.....	.....	.....	14c	.....	15c	.....	15c	14c	14c	.....	15c	13c	15c	13c	16,200
Girard	Ariz	.....	.....	.....	.....	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Gold Placer, G.	Col.	.....	5,000,000	200,000	25	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Goodshaw, G.	Cal.	.....	10,000,000	100,000	100	130,000	Oct.. 1880	0 25	.....	.....	.....	.....	.....	.....	62c	56c	61c	59c	62c	60c	62c	57c	58c	54c	24c	48c	21,300
Glynn Dale Con. G	Cal.	.....	10,000,000	100,000	100	5,000	July. 1880	0 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Granville, G.	N. C	1,231 acs.	300,000	300,000	1	*	.....	.....	.....	.....	.....	.....	.....	.....	6c	5c	6c	.....	.....	.....	7c	.....	5c	.....	5,200
Harshaw	Ariz	.....	10,000,000	100,000	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Iron Silver	Colo	.....	10,000,000	500,000	20	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.35	.....	3.60	3.30	3.55	3.45	3.40	.....	3.35	.....	8,600
Justice, G. s.	Nev.	2,000	10,500,000	105,000	100	3,206,500	Sept. 1880	0 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Kossuth	Nev.	2,700	10,800,000	108,000	100	421,200	Aug. 1877	0 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lacrosse	Col.	3,900	1,000,000	100,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	27c	.....	28c	27c	28c	27c	.....	.....	.....	28c	.....	3,800
Leviathan	Nev.	2,000	10,000,000	100,000	100	325,000	July. 1880	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lucerne	Col.	4,200	5,000,000	500,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12c	11c	.....	.....	.....	.....	12c	11c	13c	.....	3,100
Malachite	Nev	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Mariposa preferred	Cal.	14,387	5,000,000	50,000	100	1,425,000	Dec. 1880	.....	.....	.....	.....	.....	.....	.....	4.00	3.75	3.50	.....	5.00	4.50	5.00	.....	7.25	5.00	9.00	7.50	2,037
" common	Cal.	acres.	10,000,000	100,000	100	1,425,000	Dec.. 1880	.....	.....	.....	.....	.....	.....	.....	3.00	.....	3.15	3.00	3.00	3.00	3.75	3.40	7.00	3.75	7.00	5.50	9,438
May Belle, G.	Cal.	1,500	10,000,000	100,000	100	56,000	Dec . 1880	0 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21c	.....	.....	.....	1,0
Mayflower	Colo	.....	1,000,000	100,000	100	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Mineral Creek	Ariz	.....	2,000,000	200,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	40c	.....	42c	40c	40c	37c	40c	37c	35c	.....	38c	35c	7,0 0
Miner Boy	Colo	.....	.....	.....	.....	*	.....	.....	.....	.....	.....	.....	.....	.....	80c	79c	85c	.....	90c	88c	.....	.....	80c	79c	80c	79c	13,200
McClinton, G.	Cal.	1,000	6,000,000	60,000	100	163,000	Oct.. 1880	0 05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Mexican, G. s.	Nev.	600	10,080,000	100,800	100	1,437,800	Sept. 1880	1 00	.....	.....	.....	.....	.....	.....	5.25	.....	5.13	.....	5.50	.....	.....	.....	4.95	.....	1,040
Mono, G.	Cal.	750	5,000,000	50,000	100	275,000	Dec.. 1880	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Navajo	Nev.	600	10,000,000	100,000	100	175,000	Dec. 1880	0 20	.....	.....	.....	.....	.....	.....	2.75	2.50	2.65	2.60	2.50	.....	2.40	2.25	2.30	.....	2.25	.....	2,150
North Standard, G.	Cal.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48c	40c	43c	25c	33c	1.0c	19c	25c	29c	17c	29c	26c	93,800
Overman, G. s.	Nev.	1,200	3,840,000	38,400	100	3,638,680	Dec.. 1880	0 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Quicksilver preferred	Cal.	8,500	4,291,300	42,913	100	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57¼	57	58¼	58	19¾	19	63¼	60	63¾	62¾	10,850
" common	Cal.	acres.	5,708,700	57,087	100	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	15	18¾	15⅝	19¼	17⅝	13,200
Rappahannock, G.	Va.	345 acres	250,000	250,000	1	*	.....	.....	.....	.....	.....	.....	.....	.....	14c	.....	14c	.....	13c	.....	14c	.....	14c	.....	14c	13c	6,000
Red Elephant	Colo	.....	5,000,000	500,000	10	*	.....	.....	.....	.....	.....	.....	.....	.....	36c	.....	37c	34c	38c	34c	38

been discontinued until the company's reduction-works are erected. It is stated that from the ore-bodies in sight ten miners could supply a ten-stamp mill with an abundance of ore. Average assays from a 4-foot breast of ore in one of the shafts yielded 83 ounces silver per ton.

Caledonia.—During the week ended January 29th, the work in the mine has been confined to stoping and getting the open cut on the surface in working order. The tanks are so far completed as to enable 30 stamps to run, and will soon be ready to run 60 stamps. The mills above have themselves been short of water the past week, compelling the shutting down of the mill until the tanks are ready. There have been employed during the week, at the mill and mine, 64 men.

Dunderberg.—The superintendent writes, under date of January 27th :

I am pleased to report the mine looking favorable. The fourth level drift has a 6-inch solid vein, quality good. Stopes in back of said level are also in very good ore; average width, 6 inches, not solid. I have two stopes at work in this level, and shall start another on February 1st, to follow the drift, which is now from 50 to 60 feet ahead of the stope. Level No. 3, this drift, has a vein about 4 inches, not solid, but good. I saw some good brittle silver in it yesterday. Shall be able to say more about it in my next report, as the vein will be taken down by that time. Stope in back of this level is in very good ore about 6 inches wide. All other points are about the same. Mill is now running full time. I use coal instead of wood, which is $8 per cord, as I can thus save $13 a day.

Empress.—The officers of the Empress Mining Company report that the steam hoisting-machinery of the mine is now completed and in operation. An additional contract for sinking the main shaft 100 feet deeper was given out on February 1st, and will be pushed to completion as rapidly as possible.

Fannie Barret.—The superintendent of the Fannie Barret mine (Colo.), owned by the North American Mining and Developing Company, telegraphed February 4th :

In cross-cut fifteen feet southwest from main shaft, at a depth of 102 feet, cut main vein of ore assaying higher than any yet found. This gives 102 feet of solid ore and doubles the ore-reserves, assaying an available amount of ore in sight aggregating 12,000 tons.

Gold Stripe.—The superintendent, under date of January 30th, writes :

The developments of the past two weeks are the most important and valuable in the history of the mine for the same length of time, both in extent and quality.

Little Pittsburg.—The following telegrams received during the week will explain the recent strike made in this mine :

LEADVILLE, February 6.—Yesterday, the great strike in the Little Pittsburg mine was thoroughly examined. It is in the workings from No. 6 Pittsburg shaft. At a depth to the level of 210 feet, a drift runs northwest 130 feet, where it is only 12 feet from the Little Chief line; then turns south, bearing east, where there is an upraise of 24 feet. The drift again runs east from south 20 feet to another raise for 20 feet. Here it cuts the ore-body at a point 80 feet from the Little Chief line and 325 feet from the Amie. Two other upraises, one 30 and the other 50 feet distant, show the same ore-body as the above. It is fully 10 feet thick and of exceedingly high-grade sand and hard carbonates filled with chlorides. Over 100 tons have already been broken, which will average 250 ounces per ton. The trned of the ore is to the north from the east. The company has a large amount of unexplored ground in this vicinity, and it seems certain that Little Pittsburg is again to be in its former productive condition. The strike is considered the most important for a year past. New shaft and ore-houses are already erecting, and in a week the mine will be shipping largely.

DENVER, February 8.—Further developments confirm the statement of a new strike in Little Pittsburg. The ore-body, as far as known, is at least 10 feet thick and 25 wide, while it may be much thicker and wider. An average of sixteen assays of the ore yielded 395 ounces of silver a ton—a higher average than was ever before known in the Little Pittsburg mine.

LEADVILLE, February 8.—The third upraise proves equal to the first two, and there is, therefore, a certainty of a vast ore-body of exceeding richness.

Little Chief.—The manager reports by telegraph :

Newly-discovered body in Pittsburg lies east of our blocks 26 and 27. Ten feet of high-grade ore exposed in two places forty feet apart, thirty feet from us at nearest point, opened at twelve feet below upper level Daly shaft, apparent trend northeast. It is not demonstrated that it extends to our line, but I have put a strong force to work to test this question. It is certainly an incentive for vigorous prospecting on north end of Chief.

Silver King.—The Tucson *Citizen* of January 26th gives the following, obtained from a resident at the Silver King :

For some time past, experiments have been making in the treatment of the ores, especially with the lixiviation process, and the roasting-furnace which was used in connection therewith has been supplemented by the addition of three more five-ton roasters. This will enable the company to use its 20-stamp mill to a much better advantage, and will supplant the concentration process to a considerable extent. The work now being done on the 310-foot level of the mine is developing an ore-body of almost fabulous richness.

Standard Consolidated.—The second annual meeting of the Standard Consolidated Company (Bodie) was held on the 10th inst, at which the annual report of the superintendent was presented. The report promises to be an elaborate and satisfactory one. The superintendent writes the vice-president, under date of January 24th :

The different ore-breasts never looked better at any time since work was commenced in the mine. On the 500 level, the lowest point from which any ore has been extracted, the ledge shows the same body of ore that we have been so successfully working on the 385 level, being about fifteen feet wide. Although we have not cut through to the hanging-wall at any place on this level, the ore here is of very good quality. On the 385 level, the north drift has been extended nearly to the northern boundary-line, showing a continuous ore-body for the whole length of the north and south drifts, over 1500 feet. This body of ore has been thoroughly prospected by upraises to the hight of 300 feet, and by winzes to the depth of 250 feet on the incline of the vein to the 500-foot level. The 385 level is now thoroughly timbered and in splendid working shape. In my annual report I shall furnish measurements, etc., and will endeavor as nearly as possible to give a full estimate of the amount of ore in place, and a full description of the different work that has been performed during the year and at present going on. Our vertical shaft has reached the 1000-foot level, from which we have started an east cross-cut in very favorable formation.

Spring Valley.—A letter, dated January 31st, from the superintendent of the Spring Valley Hydraulic Gold Company, states that no damage had been done, so far as known, to the works of the company by the severe rain-storm which had just passed over. The reservoirs and ditches were known to be in good condition, but no news had been received from the levees or canal. Every thing is going on well at the mine, but a number of men had to be discharged during the storm, as the bank tumbled down in places in a manner to endanger their lives. A splendid lead of blue gravel and rotten boulders on Main Table Mountain has been exposed. The deep bottom gravel from the open cut, now making, in the same vicinity, also shows good prospects. The entire outlook is promising, and the weather is clearing off.

Tombstone Mill and Mining Company.—A telegram dated February 7th, from the superintendent of the company, says :

Changing ten more stamps of the Corbin mill to wet crushing. Bullion yield, $5000 a day. So far this month, mines improving.

DIVIDENDS.

The Tombstone Mill and Mining Company has declared its eleventh regular monthly dividend of $50,000, or 10 cents per share on the capital stock, payable February 15th. Transfer-books closed from 10th to 15th inclusive.

The Northern Belle Mining Company has declared a dividend of 50 cents per share.

The Idaho Grass Valley Mining Company has declared a dividend of $7.50 per share.

The third dividend on the capital stock of the Hibernia Consolidated Mining Company has been declared, payable on February 28th. The books of the company will close on February 23d, and reopen March 1st. The amount of dividend is 10 cents per share.

The Western or Contention Mining Company has declared a dividend aggregating $75,000; total to date, $750,000.

The Silver King Mining Company has declared a dividend of 25 cents per share. It is rumored that the capital stock of the company will soon be increased.

The Standard Consolidated Mining Company has declared its regular monthly dividend of 75 cents per share.

The Ontario Silver Mining Company has now paid out to its stockholders in dividends the large sum of $3,200,000. The regular monthly dividend for January is payable on the 15th at Wells, Fargo & Co.'s. Transfers closed on the 10th.

The regular monthly dividend of 25 cents per share (for January) has been declared by the Deadwood-Terra Mining Company, of Dakota, payable by Wells, Fargo & Co. on the 21st. Transfers close on the 15th.

The North Pennsylvania Railroad announces a quarterly dividend of one and one half per cent (less five per cent for the contingent fund), payable February 25th.

The Delaware Division Canal Company announces a dividend of two dollars per share, payable February 15th.

The Decatur Coal Company, 234 South Fourth street, announces a semi-annual dividend of two per cent, payable on demand.

The Andover Iron Company announces a dividend of five per cent, payable February 15th.

The Thomas Iron Company has declared a dividend of four per cent from six months' earnings.

The North Chicago Rolling Mill Company announces a dividend of $10.50 per share.

SAN FRANCISCO MINING STOCK QUOTATIONS.

Daily Range of Prices for the Week.

NAME OF COMPANY	CLOSING QUOTATIONS. Feb. 4.	Feb. 5.	Feb. 7.	Feb. 8.	Feb. 9.	Feb. 10.	Opening. Feb. 11.
Alpha	3	2 7/8	3 1/4	3 1/8	2 7/8	.....	.....
Alta	13-16	13-16	1 3/8	1 1/4	1 1/4	1 3/8	.....
Argenta	.....	.....	.....	.....	.....	.....	.....
Bechtel	11-16	.....	.....	11-16	.....	1 1/8	.....
Belcher	29-32	29-32	1 1/8	1	.....	.....	.....
Belle Isle	.....	.....	.....	.....	.....	.....	.....
Belvidere	.....	.....	.....	.....	.....	.....	.....
Best & Bel.	6 3/4	6 1/8	6 1/2	6 3/4	6 3/8	6 5/8	.....
BlackHawk	.....	.....	.....	.....	.....	.....	.....
Bodie	6	5 7/8	5 7/8	5 3/4	5 7/8	6 1/8	.....
Boston Con.	.....	.....	.....	.....	.....	.....	.....
Bullion	1 1/2	1 7/8	1 3/8	1 5/8	1 1/2	1 1/2	.....
Bulwer	2 1/2	.....	2	.....	2	.....	.....
Caledonia	.....	.....	.....	.....	.....	.....	.....
California	1	27-32	1	24-32	15-16	1	.....
Cal. B. H.	.....	.....	.....	.....	.....	.....	.....
Chollar	1 5/8	1 5/8	1 3/4	1 3/4	1 3/4	1 3/4	.....
Columbus	.....	.....	.....	.....	.....	.....	.....
Con. Imp	.....	.....	.....	.....	.....	.....	.....
Con. Pacific	.....	1	1	.....	29-32	15-16	.....
Con. Va	1 3/8	1 3/8	1 1/2	1 3/8	1 1/2	1 1/2	.....
Crown P'int	1	1 1/4	1 3/8	1 3/8	1 1/2	1 3/4	.....
Dudley	.....	.....	.....	.....	.....	.....	.....
Eureka Con	.....	21 1/2	23	23	22 1/2	22	.....
Exchequer	1	1	1 1/4	1 1/4	1 1/4	1 1/4	.....
Goodshaw	9-16	19-32	19-32	19-32	19-32	13-32	.....
Gould &Cur	1 5/8	2 1/4	2 3/8	2 1/2	2 1/2	2 3/8	.....
Grand Prize	1 5/8	1 5/8	1 3/4	1 3/4	1 7/8	2	.....
Hale & Nor.	3	2 7/8	3 1/4	.....	3 1/4	3 1/2	.....
Hillside	.....	.....	.....	.....	.....	.....	.....
Indep'd'nce	.....	.....	.....	.....	.....	.....	.....
Jackson	.....	.....	.....	.....	.....	.....	.....
Julia Con	.....	.....	.....	.....	.....	.....	.....
Justice	.....	.....	.....	.....	.....	.....	.....
Kentuck	.....	.....	.....	.....	.....	.....	.....
Lady Wash	.....	.....	.....	.....	.....	.....	.....
Leeds	.....	.....	.....	.....	.....	.....	.....
Leopard	.....	.....	.....	.....	.....	.....	.....
Leviathan	.....	.....	.....	.....	.....	.....	.....
Mammoth	5-16	.....	5-16	.....	.....	.....	.....
Manhattan	.....	.....	.....	.....	.....	.....	.....
May Belle	.....	.....	.....	.....	.....	.....	.....
Mar. White	13-32	13-32	.....	.....	.....	.....	.....
McClinton	.....	.....	.....	.....	.....	.....	.....
Mexican	5 1/4	5	5 3/8	4 7/8	4 3/4	5	.....
Mono	1 1/2	.....	1 1/2	1 1/2	.....	.....	.....
Navajo	.....	.....	.....	.....	.....	.....	.....
North. Belle	.....	12	13	12 1/4	12	12 1/4	.....
N. Bonanza	.....	.....	.....	.....	.....	.....	.....
N. Standard	.....	.....	.....	.....	.....	.....	.....
Noonday	1 3/4	1 3/4	.....	2 1/4	2 1/4	2 1/4	.....
Ophir	4 5/8	4 3/4	4 3/4	4 3/8	4 1/4	4 5/8	.....
Orig. K'ys'e	.....	.....	2	1 5/8	1 1/2	29-32	.....
Oro	7-16	13-32	7-16	13-32	5-16	5-16	.....
Overman	1/2	19-32	21-32	11-16	21-32	11-16	.....
Potosi	1 3/4	1 7/8	2	2	2	2	.....
Ray. & Ely	.....	.....	.....	.....	.....	.....	.....
R. de Monte	.....	.....	.....	.....	.....	.....	.....
Savage	13-16	13-16	1 3/4	1 3/4	1 3/4	1 7/8	.....
Scorpion	.....	13-16	.....	29-32	.....	.....	.....
Seg. Belcher	.....	.....	.....	.....	.....	.....	.....
Sierra Nev.	5	5	6 1/8	5 1/4	5 3/8	5 7/8	.....
Silver Hill	.....	.....	.....	.....	.....	.....	.....
Silver King	19 1/2	21	21 3/4	22	19	18 7/8	.....
So. Bulwer	.....	.....	13-32	.....	.....	.....	.....
Summit	.....	.....	.....	.....	.....	.....	.....
S. Noonday	.....	.....	.....	.....	.....	.....	.....
Syndicate	.....	.....	.....	.....	.....	.....	.....
Tioga	.....	.....	.....	.....	.....	.....	.....
Tip Top	.....	.....	2	1 7/8	1 7/8	.....	.....
Trojan	.....	.....	.....	.....	.....	.....	.....
Tuscarora	7-16	7-16	7-16	1/2	.....	.....	.....
Union Con	8 1/4	8 1/4	8 1/2	8	7 3/8	7 5/8	.....
Utah	.....	.....	.....	.....	.....	.....	.....
Wales	3/4	3/4	.....	.....	.....	.....	.....
Yel. Jacket	2 1/2	2 5/8	3 1/2	3	2 7/8	3	.....

REVIEW OF THE SAN FRANCISCO MARKET.

Nothing of special interest can be said with reference to the San Francisco share market. The list continues very weak, and the favorites, as a rule, lower; Union Consolidated, for example, closing yesterday at $7 7/8, the lowest price recorded for a long time past. A dispatch from Virginia City, Nev, says :

On the 2600 level, Union Consolidated is completed, nine holes having been run, and water heavy in every direction; but the drills show ore in at least three places. Hole No. 9 has been run 120 feet, giving assays from a trace to $20 per ton. On Monday, drifting from the shaft will commence on the 2600 level.

The whole list is depressed in the same proportion. A recent issue of the *Commercial Herald* observes :

The mining stock market is completely demoralized, and attention is now being directed to other localities than the Comstock lode, and with marked success in very many instances. That is, the success lies in the fact that good and legitimate investments are made, and less dependence is placed on the chances of a "deal," which is nothing more or less than gambling. Good properties are sought in every direction, and when found and proved, the coin is ready to take them. More than the usual number of such investments had been made in California gold mines during the past year, with the full intention of opening them more extensively in most instances. Arizona is receiving more and more attention from California capital, and under this influence the general trade of that section will find it advantageous to deal with us in the various articles of commerce.

The Sutro Tunnel, at last advices, was in the Imperial Mining Company's ground, and had over 900 feet to run to reach the Yellow Jacket shaft. The tunnel is discharging about three and a quarter millions of gallons of hot water per day.

COAL STOCKS.

NAME OF COMPANY.	Capital Stock.	SHARES. No.	SHARES. Par Val.	Last Dividend. Mo.	Y.	R't.	Rate per Ann.	Quotations of New York stocks are based on the equivalent of $100. Philadelphia prices are quoted so much per share. Feb. 5. H.	Feb. 5. L.	Feb. 7. H.	Feb. 7. L.	Feb. 8. H.	Feb. 8. L.	Feb. 9. H.	Feb. 9. L.	Feb. 10. H.	Feb. 10. L.	Feb. 11. H.	Feb. 11. L.	SALES
	$		$				Per c'nt													
Am. Coal Co.	1,500,000	60,000	25	....	..	....	....	51⅜	48	52½	50	54	51¾	53½	52½	53⅝	52½	56	55	24,363
Col. C. & I.	10,000,000	100,000	10	....	..	....	....	23½	22¼	24⅜	23	24¼	24	24	.....	23¾	.....	25¾	24½	4,642
Consol. Coal.	10,250,000	102,500	100	Jan.	77	2½	....	....	..	40¼	40	.....	.....	42½	40	41½	41	41	39	3,856
Cumb. C. & I.	500,000	5,000	100	....																
Del. & H. C.	20,000,000	200,000	100	Aug	76	4	9	‡	105	106¾	105⅝	107¼	106	107	106¼	106¾	106¾	110	109	29,875
D., L. & W. RR	26 200,000	524,000	50	Jan.	81	1½	6	122	121¼	123	122¼	123¾	122¾	123⅛	122⅝	124⅞	123¼	125	124	85,250
Elk Lick C Co	.....	.....	..	....	..	....	....	....	....	....	....	....	....	....	....	39	36	....	.....	1,500
Lehigh C. & N	10,448,550	208,971	50	Sept	76	1½	5½	42¾	42	42	41⅞	42¾	42⅛	42⅝	42¼	42⅞	42¾	.....	.....	16,569
Leh. V'y R. R	27,042,900	540,858	50	....	..	....	4	59⅛	59	59⅛	59	59⅜	59	59⅜	59¼	59⅛	59	.....	.....	12,637
Maryl'd Coal	4,400,000	44,000	100	Jan.	76	1¼	1½	....	.....	.....	.....	.....	.....	28	33	32	31¼	33½	32¼	9,800
Montauk C'l.	2,500,000	25,000	100	....	..	....	....	....	.....	.....	.....	.....	.....	....	....	....	....	.....	.....	...
Morris & Es'x	15,000,000	300 000	50	July	79	3½	7	§	.....	121	.....	121½	121¼	....	....	122¾	121	.....	.....	740
New Cen. C'l	5,000,000	50,000	100	Dec.	80	2	....	....	.....	28	.....	28	.....	35¼	30	35	34½	35	34¼	10,550
N. J. C. RR.	20,600,000	206,000	100	Apr	76	2½	2½	92⅛	92⅛	92⅝	92½	93⅛	92⅜	93⅛	92⅛	96⅜	93⅛	98	96⅜	76,387
N.Y. & S.Coal.	1,500,000	150,000	100	....	..	....	....	....	....	....	....	....	....	....	....	....	....	....	.....	.....
Penn. Coal..	5,000,000	100,000	50	Oct.	79	3	10													
Penn. R. R..	68,870,200	1,337,404	50	Nov.	80	3	6	64⅝	64⅜	64¾	64⅜	65⅜	64⅞	65⅝	65⅛	65⅝	65⅛	.....	.....	42,317
Ph. & R. RR*.	34,278,150	685,563	50	Jan	76	2½	....	64	62	62	60⅜	63⅛	62	63¼	62	62⅛	61⅜	63	62⅜	22,363
Spring Mt. C'l	1,500,000	30,000	50	Dec.	79	3½	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Of the sales of this stock, 10,170 shares were sold at the Philadelphia Stock Exchange, and 12,193 shares at the New York Stock Exchange.

‡106¼. § 121½. Total Sales..... 270,799.

BOSTON MINING STOCKS.

NAME OF COMPANY.	Shares.	Par.	Feb. 4. H.	Feb. 4. L.	Feb. 5. H.	Feb. 5. L.	Feb. 7. H.	Feb. 7. L.	Feb. 8. H.	Feb. 8. L.	Feb. 9. H.	Feb. 9. L.	Feb. 10. H.	Feb. 10. L.	SALES. Shares
Allouez, c.....	Mich.	80,000	$25	.....	.....	4½	....	4½	.....	4⅝	4½	4¾	.....	4¾	.....
Atlantic, c.....	Me..	40,000	25	.....	.....	.....	.....	.....	.....	17	.....	.....	.....	17½	.....
Arizona Queen..	.....	.....	....	.....	.....	.....	.....	.....	.....	1.25	.....	.....	.....	1.25	.....
Atrata.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Aztec.....	Mich.	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Adrie Con. G. S..	Me..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arizona & Mass.	Ariz..	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Acton Con.....	Me..	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barton & Eureka	.....	.....	.....	1.51	.....	1.53	.....	.....	.....	1.51	.....	.....	.....	1.52	.....
Blue Hill, c.....	Me..	50,000	.....	.....	.....	5¼	.....	5⅝	5⅛	5⅛	.....	5¼	.....	5¼	.....
Brunswick.....	Me..	.....	....	21	.....	.....	.....	.....	.....	21½	.....	21½	.....	.....	.....
Boston, G. and S.	Colo..	.....	25	4 13¼	4.11	4.14	4.12	4.15	4.13	4.15	.....	4.16	4.15	4.16	4.14
Cal. & Hecla, c..	Mich.	100,000	10	.....	.....	250	.....	250	.....	.....	.....	250	.....	250	.....
Cape Breton....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catalpa..... ...	Colo..	300,000	25	2⅞	2¾	2¾	*	2¾	.....	2¾	.....	†	2¾	†	2¾	.....
Central, c.....	Mich.	20,000	50	....	.....	.....	.....	40	.....	.....	.....	.....	.....	.....	.....	.....
Copper Falls, c.	Mich.	20,000	....	.....	.....	14½	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chrysolite.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Copper Harbor..	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Contentment...	Ariz.	.....	....	1½	.....	.....	.....	1.55	.....	1.55	1.50	1.60	.....	1.75	1.63	.....
"Cusie".....	Me..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crystal Mica....	Me..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dana, c.....	Mich.	20,000	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Duncan, s.....	Ont..	60,000	25	.....	.....	.....	.....	3⅝	.....	.....	.....	.....	.....	.....	.....	.....
Deer Isle.....	Me..	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dunkin.....	Colo..	.....	....	1.30	.....	1.40	.....	.....	.....	1.45	.....	.....	.....	1.50	1.40	.....
Douglass.....	Me..	.....	....	.....	.....	.....	.....	3 3-16	.....	.....	.....	.....	.....	.....	.....	.....
Eastern.....	Me..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Empire.....	Ariz..	.....	....	.45	.40	.46	.43	.60	.50	.60	.55	.65	.55	.65	.57	.....
Eureka Con....	Nev..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin, c.....	Mich.	20,000	....	16	.....	16¼	16	16⅛	15¾	16⅛	16	16⅞	1 ½	17¼	16⅞	.....
Gold Hill.....	Colo..	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grange, c.....	Me..	.....	....	1.00	.....	.90	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gregory.....	Colo..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Golden Circle..	Colo..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gold Stripe.....	Cal..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hanover.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hukill.....	Colo..	20,000	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Harshaw.....	Ariz..	100,000	100	11⅛	9½	12	11½	12½	11¾	16	13	17¼	16¼	17	16¾	.....
Humboldt, c....	Mich.	20,000	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hungarian, c...	Mich.	20,000	25	.....	.....	.....	.....	59	.....	.....	.....	.....	.....	.....	.....	.....
Huron.....	Mich.	.....	....	.....	.....	5½	.....	5½	.....	5½	.....	5¾	5¼	5¾	.....	.....
Hercules.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverly G. Grp..	Colo..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horn-Silver, s..	Utah.	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
International, s.	Ont..	60,000	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Pittsburg..	Colo..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maine Mica.....	Me..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.59	.58	300
Madison.....	.....	.....	....	1⅛	1¼	1¼	1¼	1½	1¼	1⅜	.....	.....	.....	.....	.....	.....
Mendocino.....	.....	.....	....	2.26	2.25	2.50	2.27	2.30	.....	2.31	.....	2.50	2.34	2.50	2.35	.....
Mexican.....	Nev..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Milton.....	Me..	.....	....	2.00	1.00	1.75	1.60	1.60	1.50	1.50	.....	1.55	.....	.....	.....	.....
Mesnard, c.....	Mich.	20,000	25	.....	.....	.....	.....	1.50	.....	.....	.....	.....	.....	.....	.....	.....
Minnesota, c....	Mich.	20,000	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.00	.....	100
Magnolia.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Mex. D. D..	N. M.	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
National, c.....	Mich.	20,000	25	2⅛	.....	2⅛	.....	.....	.....	.....	.....	2⅛	.....	.....	.....	.....
North Castine..	Me..	.....	....	.....	.....	1.65	1.60	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ore Knob, c....	N. C.	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orford, NICKEL..	Can..	50,000	20	.....	.....	10¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Osceola, c.....	Mich.	40,000	25	.....	.....	39½	.....	39½	.....	.....	.....	39½	.....	39½	.....	.....
Pewabic, c.....	Mich.	20,000	25	.....	.....	21	20¾	20½	.....	20½	.....	21½	21	22¾	21½	.....
Phœnix, c	Mich.	20,000	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pine Tree.....	.....	.....	....	.....	.....	.....	.....	.....	.....	1.75	1.50	1.45	1.40	1.00	.....	.....
Promontory Con	Colo..	.....	....	.....	.....	.....	.....	.....	.....	6.75	6.50	7.00	.....	7.50	7.25	.....
Quincy, c.....	Mich.	.....	....	36½	.....	36	35¾	36	35¾	36	35½	37	.....	37½	37	.....
Ridge, c.....	Mich.	20,000	25	6 1-16	6.00	.....	.....	6.25	.....	.....	.....	.....	.....	.....	.....	.....
Rudisill.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Revere.....	Me..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland, c.....	Mich.	20,000	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Pedro.....	N. M.	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Simpson Gold..	.....	.....	....	.....	.....	.....	.....	.....	.....	.87½	.60	1.00¼	1.00	.....	.....	.....
Sycamore.....	.....	.....	....	1.01	1.00	1.00	.....	1.06¼	1.00	1.10	1.00	1.13	1.12	1.20	1.10	.....
Star Coal.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Star Coal, 8 p. c.	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
So. Hite, c.....	Cal...	100,000	25	.....	.....	.....	.....	.37½	.....	.....	.....	.....	.....	.33½	.....	.....
St. Clair.....	.....	.....	....	.....	.....	.....	.....	3¼	.....	3¼	.....	3¼	.....	3¼	.....	.....
Swan's Isle.....	Me..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Silver Islet, s...	Mich	40,000	25	34½	34	34¾	.....	34	.....	33½	.....	33	.....	35	33	.....
South Noonday..	.....	.....	....	1 12½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Star.....	.....	.....	....	2¼	.....	.....	.....	.....	.....	.....	.....	.....	.....	2⅜	.....	.....
Stewart.....	.....	.....	....	.....	.....	.....	.....	1.25	1.20	1.20	1.00	.....	.....	.....	.....	.....
Superior, c.....	Mich.	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sutro Tunnel...	Nev..	*	25	.....	.....	.....	.....	.....	.....	1.20	.....	.....	.....	.....	.....	.....
Sierra Nevada..	Nev..	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sul'v'n & Wa'k'g	.....	.....	....	7½	.....	8	7¾	8	.....	7⅞	.....	7¾	.....	7½	.....	.....
South Bulwer...	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tecumseh.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuolumne.....	Cal..	.....	....	1.09	1.08	1.09	1.08	1.10	1.09	1.10	.....	1.11	.....	1.13	1.12	.....
Twin Lead.....	Me..	.....	....	1.00	.....	.....	.....	1.25	.....	.....	.....	.....	.....	.....	.....	.....
Winthrop.....	Mich.	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Young Hecla.....	.....	.....	....	.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*2 11-16 †2 13-16 c Copper. s. Silver.

Copper and Silver Stocks.

Reported by C. H. Smith, 15 Congress street, Boston, Stock Broker and Member of the Boston Mining and Stock Exchanges.

BOSTON, Feb. 10.

The market for copper stocks the past week shows a fair degree of activity, and in the last two days a much better feeling has been manifested, together with an improvement in prices, which is indicative of a movement in this class of securities, and we confidently look for much higher quotations in the immediate future. Ingot copper continues to rule strong at 19¾@20c., and as the supply is constantly being exhausted, and no shipments can be looked for until late in the season, an advance is predicted of several points from the present price. The silver stocks generally have been well sustained, with Harshaw as the leading stock, which shows an advance of nearly one hundred per cent.

Calumet & Hecla is without change at $250, with but few sales.

Central sold at $40.

Copper Falls, dull at $14@$14½, on sale of about 1000 shares.

Franklin opened at $16, declined to $15¾ in the early dealings, since which it has steadily advanced, and to-day sold at $17¼.

Pewabic was weak and declined to $20½, but rallied to-day under the improved feeling in the market, and advanced to $22½, which was bid at the close of the morning call. We consider this stock one of the best to buy on the list, and look to see it sell up into the thirties before the season is over.

Quincy declined to $35½, but rallied two points to-day, selling at $37½.

Atlantic sold at $17@$17½.

Osceola steady but dull at $39½.

The smaller coppers show a good degree of firmness, and will doubtless be active at improved prices with the rest of the market. There is a good deal of inquiry for them, and holders are firm and not disposed to part with them at present. We note sales of Allouez at $4¼@$4¾.

Ridge, at $6@$6¼.

Huron, at $5½@$5¾.

Douglass, at $3 3-16.

Blue Hill, at $5¼@$5⅜.

St. Clair, at $3¾.

National, at $2½.

Madison, at $1½@$1½.

Star, at $2¼@$2⅜.

Mesnard, $1½.

Hungarian, at 50c.

Brunswick Antimony continues to rule dull at $21@$21½.

In silver stocks, Catalpa very steady at $2¾@$2⅞, with sales of about 5000 shares.

Harshaw has been the card this week, advancing from $9½ to $17 on large orders, sales aggregating over 11,500 shares.

Silver Islet opened at $34, advanced to $34¾, declined to $33, and closed to-day at $35.

Sullivan & Waukeag advanced to $8, but declined to $7½.

We note sales of Contentment at $1.50@$1.60.

Empire at 40@65c.

Oxford Nickel at $10¾.

3 P.M.—At the afternoon call, the market was quite steady, with sales of Harshaw at $16¾@$17; Quincy, $37½@$37; Pewabic, $22¾; Catalpa, $2¾@$2 13-16; Atlantic, $17½; Silver Islet, $34½@$35; Copper Falls, $14½ bid.

At the Boston Mining and Stock Exchange, the volume of business is much increased, and a good deal of activity is noted in the leading specialties. Empire Mining and Milling Company has been very active, and large sales reported at an advance from 30c. to 65c. Boston Gold and Silver steady at $4.14@$4.16. An afternoon call has been adopted, which has been well attended and a fair amount of business transacted.

Gas Stocks.

NEW YORK, Friday Evening, Feb. 11.

The market for gas stocks shows a slight upward tendency.

The following list of companies in New York and vicinity is corrected weekly by GEORGE H. PRENTISS, Broker and Dealer in Gas Stocks, No. 19 Broad street, New York. Quotations are based on the equivalent of $100.

COMPANIES IN NEW YORK AND VICINITY.	Capital Stock.	Par.	DIVIDENDS. Rate per ann.	DIVIDENDS. Am. of last.	DIVIDENDS. Date of last.	QUOTATI'NS Bid.	QUOTATI'NS As'd.
	$		P. ct.				
Mutual, N. Y....	5,000,000	$100	6	1½	Jan., '81	60	65
" Bonds..	900,000	1,000	6	3½	Aug., '80	100	105
N. York "	4,000,000	.....	8	4	Nov., '80	95	97
Metrop. "	2,500,000	100	10	5	Aug., '80	136	140
" Certfs..	1,000,000	.....	7	3½	Aug., '80	100	105
Harlem "	1,850,000	50	.....	3	Feb., '80	60	65
Manhat. "	4,000,000	50	.....	5	Dec., '80	175	180
Brooklyn, Bkin.	2,000,000	50	.....	5	Nov., '80	108	110
Nassau	1,000,000	25	.....	2½	Jan., '80	45	50
" Certfs..	700,000	1,000	7	3½	Nov., '80	90	95
People's.....	1,000,000	10	.....	3½	Jan., '80	25	30
" 1st m. Bonds	400,000	.....	7	3½	Nov., '80	100	103
Bonds...	100,000	.....	6	3	Jan., '81	75	80
Metrop. "	1,000,000	100	5	2½	Jan., '81	50	55
W'msb'g "	1,000,000	50	.....	2	Jan., '80	60	62½
" Bonds*..	1,000,000	1,000	6	3	Oct., '80	101	104
Citizens'.....	1,200,000	20	.....	2½	Aug., '80	40	45
" Bonds..	315,000	1,000	.....	3½	Oct., '80	100	105
J. C., N. J.....	750,000	20	.....	7½	Jan., '81	140	147
Municipal, N. Y.	2,000,000	100	.....	5	Jan., '81	157½	162
" Bonds..	750,000	100	7	3½	Nov. '80	105	110
Fulton Municipal.	1,500,000	100	.....	.....	.....	50	55

Coal Stocks.

NEW YORK, Friday Evening, Feb. 11.

There has been a large business and strong prices for the coal shares during the past week, the result of the showing the companies are now making and their prospects. There will be a large business in coal at good prices for a short time; but as the managers, whenever it was in their power, have always overdone it, so will they again. The elements have been controlling them of late, having increased the demand and limited the ability to supply, so that prices could not go down.

The Cumberland coal stocks have been receiving a

large amount of attention during the past week, and show considerable advances. On actual merit, some of these stocks are selling below what they are worth; while if the same arguments were applied for "bulling" these stocks that are applied to the anthracite shares, they should go to par. The American and Maryland companies are especially worthy of the attention of investors. The completion of the George's Creek and Cumberland RR. is assured, and will directly benefit these companies. No opposition of the Baltimore & Ohio RR. can prevent the company reaching the Chesapeake & Ohio Canal, when these two coal companies will immediately receive advantages over their present arrangements of fully 30c. per ton, and for a company with the capacity of the Maryland, say about 500,000 tons per annum, this is a very important item, being of itself about 3½ per cent on the capital stock of that company.

BULLION MARKET.

BULLION SHIPMENTS.

We give below a statement showing the latest bullion shipments. These are officially obtained from the companies where that is possible; and where official statements can not be procured, we take the latest shipments published in those papers nearest to the mines reported. The table gives the amount shipped for the week up to the date given, as well as the aggregate shipments to such date, from the first of January, 1881.

The shipments of silver bullion are valued at $1.29·29 per ounce, Troy; gold at the standard $20.67 per ounce, Troy. The actual value of the silver in the following table is therefore subject to a discount, depending on the market price of silver. The price of silver being now about $1.12 per ounce, the following figures, where they relate to silver bullion, should be diminished by about 13½ per cent to arrive at actual value:

		For the week.	Month of February.	Year from Jan. 1st, 1881.
Alice Mill	Ariz.	$8,210	$8,210	$50,210
Barbee & Walker	Utah	13,221	13,221	39,001
Bodie	Cal	8,370	8,370	42,060
Bos. & Colo. S. W'ks.	Colo.	.....	.....	253,000
Crismon-Mammoth	Utah	4,750	4,750	8,100
Connor	"	.....	.....	14,610
Christy	"	9,086	9,086	39,869
Con. Virginia	Nev.	19,300	19,300	78,600
Contention	Ariz.	36,880	36,880	200,010
Dexter Mill	"	.....	.....	11,000
Derbic	Cal	13,200	13,200	13,200
Eureka Con.	Nev.	31,300	31,300	181,540
Elkhorn Mill	"	.....	.....	5,000
Exchange Silver	Colo.	.....	.....	43,000
Germania	Utah	6,470	6,470	55,045
Grand Prize	Nev.	.....	.....	24,965
Horn-Silver	Utah	32,000	32,000	69,500
Hermosa Hill	Ariz.	.....	.....	12,000
Indian Queen	Nev.	.....	.....	16,185
Little Chief	Colo.	.....	.....	19,900
Morning Star	"	.....	.....	15,200
Northern Belle	Cal	15,080	15,086	139,860
Noonday	Ariz.	12,800	12,800	37,340
Navajo	Nev.	6,000	6,000	6,000
Ontario	Utah	18,401	18,401	124,013
Ophir	Nev.	5,170	5,170	5,170
Pascoe	Utah	.....	.....	1,650
Richmond	Nev.	19,270	19,270	133,473
Stormont	Utah	9,536	9,536	60,435
Silver Bow	Mont.	15,000	15,000	51,342
Standard	Cal	53,400	53,400	273,043
Syndicate	"	5,000	5,000	9,700
Silver King	Ariz.	.....	.....	89,883
Star	Nev.	3,000	3,000	14,560
Sierra Nevada	"	.....	.....	16,775
Tip Top	Ariz.	30,200	30,200	58,800
Tintic M. and M. Co.	Utah	.....	.....	2,224
Tombstone M. & M. Co	Ariz.	.....	.....	53,333
Union Con.	Nev.	.....	.....	43,100
Wood River	Idaho	.....	.....	6,450

PASSING BULLION.

Jan. 29	Butte	Mont.	$39,998

ARIZONA.

Champion Mill.—This mill recently started up on California ore. The results obtained are satisfactory.

Head Center.—It is stated that this company has purchased the Sunset mill at Contention City, and will at once commence the reduction of ore.

Holland.—Recent statements report a shipment of 21,000 pounds high-grade bullion. The smelter will start up on a 90-day run shortly.

Queen Creek.—A new ten-stamp mill is building on Queen Creek for the Supriser mine, which, it is stated, is producing gold quartz.

Silver King.—The *Citizen* says: For some time past, experiments have been making in the treatment of the ores, especially with the lixiviation process, and the roasting furnace which was used in connection therewith has been supplemented by the addition of three more 5-ton roasters. This will enable the company to use its 20-stamp mill to a much better advantage, and will supplant the concentration process to a considerable extent.

BRITISH COLUMBIA.

Gold Mines.—A recent dispatch from Victoria, B. C., says that the official returns state that the yield of the gold mines in 1880 amounted to $1,013,827.

CALIFORNIA.

Green Mountain.—It is stated that the ore-reserves of this mine are very large; 150 tons of ore are daily crushed by the 92 mill-stamps.

Nevada City.—The bullion shipments for the month of January from the neighboring mines, through Wells, Fargo & Co., amounted to $97,900.

Standard.—The superintendent reports that during the past week 1380 tons of ore were shipped to the mill; average pulp-assay, $75.58; crude bullion received, 10,235 ounces; shipments to San Francisco amount to about $121,963.28.

COLORADO.

The Leadville *Circular* of February 5th gives the following table of the approximate daily output of the leading mines of the camp at the present time:

Mines.	Tons.	Mines.	Tons.
Scooper	5	Carbonate Hill	3
Florence	8	Henrietta	30
Little Johnnie	10	Evening Star	50
Colorado Prince	10	Dunkin	15
Little Pittsburg	17	Robert E. Lee	40
Chrysolite	16	Silver Wave	20
Little Chief	30	Little Giant	5
Iron Mine	150	Crescent & Etna	10
Silver Cord	20	Highland Chief	16
Catalpa	15	Comstock	5
Fryer Hill	10	Matchless	20
Amie	0	Hibernia	5
Oro La Plata	40	Climax	..
Glass-Pendery	12	Great Hopes	10
Morning Star	25	Dyer	6
Columbia	5	Others, say altogether	30
Argentine	15	Denver City	..
Virginius	5	Agassiz	5
Half-Way House	8		
Holden	5	Total, tons	676

Black Hawk.—The quartz mills now and recently at work in Black Hawk are the Bobtail, 125 stamps; the New York, 75; the New York & Colorado, 40; the Gregory, or Richman, 50; the Randolph, 50; the Cashier, 35; Kimber, 35; Fullerton, 40; Wain, 25; Hidden Treasure, 20, and one or two others. The Briggs mill has lately been overhauled and repaired. In Nevadaville are the Lewis, 25 stamps; Mackey, 37, and 40 stamps in the Kansas Con. All of the Black Hawk mills named are running their full complement of stamps, so that there are over 600 stamps at work within a mile or so of Central City, crushing altogether some 450 tons of ore daily, that yield over $4000. About 25 tons per day of smelting ore shipped daily contain an equal value.

Bowen Gulch.—Recent reports state that 100 locations have been made, and a few look well. A concentrating mill and one or two smelters are projected to be built next summer. The main traveled route to Middle Park is by Hook & Rogers's stage line from Georgetown via Empire, Berthoud Pass, and Cozzens hay ranche to the main trading settlement, Hot Sulphur Springs, 50 miles.

Catalpa.—The superintendent reports the January product of ore to have been 330 tons, yielding $30,690; expenses, about $9000. The ore, it is stated, averaged over $90 per ton.

Dunkin.—This mine during the month of January shipped 569 tons of ore. The net profit of the mine over all expenses will be about $26,000.

Freeland.—The superintendent reports the product for the past year (eleven months) to have been $393,000, and states that the mine is now in a fine state of development and improvement, and will be worked for the coming year to the full capacity of both the Freeland and Clear Creek mills.

Hibernia.—300 to 400 tons of ore were at the smelters last week. A part of the week's shipment sold for $6-778.09. One lot of 7060 pounds sold at the rate of $572.30; another of 15 tons brought $138.70 per ton.

Hukill.—The product for the past year amounted to $133,000.

Miner Boy.—Twenty-one tons of ore produced a bar of bullion weighing 112 ounces.

Ohio & Missouri Smelter.—It is stated that this smelter is to be enlarged.

Printer Boy.—There are two steam hoisting-engines at this mine. The ore is mostly gold-bearing quartz and iron and copper pyrites.

Scooper.—This mine shipped during the month of January 180 tons of ore, ranging from 20 to 300 ounces to the ton. The product of the mine will be temporarily suspended, to admit an increased development of work and also in the hope of securing more favorable terms for treatment.

DAKOTA.

Caledonia.—For the week ending January 29th, this mine shipped 84 tons of ore to the mill.

MICHIGAN.

Lake Superior Copper Mines.—The January product of the prominent Lake Superior copper mines is as follows:

	Tons.	Pounds.
Allouez	82	845
Atlantic	150	
Calumet & Hecla	1,579	185
Franklin	135	300
Pewabic	80	520
Quincy	140	310

MONTANA.

Alta-Montana.—It is reported the quantity of iron ore delivered at the works daily amounts to 30,000 pounds, and the ore-product received from the mine is ample to keep the entire works running to their full capacity.

Bell.—It is reported that from the wioze in the lower level of this mine some of the richest silver and copper ore yet produced from the mine is being extracted. The company will erect a smelter in the spring.

Montana Copper Company.—Grading for the new matting furnace at this smelter has been finished and building will begin as soon as the weather moderates. It is stated that this company has bought a claim on the Burlington lode for $35,000.

NEVADA.

Comstock Mines.—For the week ending February 5th, these mines raised ore as follows:

	Tons.	Assay value per ton.
California	153	$18.53
Consolidated Virginia	162	16.50
Sierra Nevada	42	$17 to $90

UTAH.

Rebellion.—The ore from this mine is to be converted into bullion by the Ferry smelter.

Salt Lake City.—The bullion shipments for the week ending February 3d amounted to $75,308.96.

Silver Reef.—Wells, Fargo & Co.'s bullion shipments from Silver Reef, for the month of January, aggregate $79,862.24.

Stormont.—The manager reports that the bullion production for the month of January aggregated the sum of $49,100.

Ontario.—The superintendent reports the following bullion shipments for the week ending January 28th:

January	22	$7,006.54
"	23	7,212.21
"	24	5,401.72
"	25	7,683.02
"	26	7,623.53
"	27	5,111.66
"	28	7,820.05
Total		$47,858.73

MISCELLANEOUS.

Bullion Receipts from the Mines to New York.—The bullion received from the mines at the various offices in this city during the week ending with yesterday, as compiled from various sources, amounts to $242,236.40, as against $269,512.35, reported in our last.

A Silver Conference Proposed.—LONDON, Feb. 4.—A Berlin dispatch to the *St. James's Gazette* says: France has renewed its proposal for an international conference on the silver question.

PARIS, Feb. 9.—It is understood that Germany has been for some time desirous that a second international monetary conference be called, and that she regrets her non-participation in that of 1877.

BERLIN, Feb. 10.—It is understood that Prince Bismarck regards with favor the proposal to again convene an international monetary congress. This proposal, which was made by the French government, and which has been accepted by the United States, has been taken into consideration by the advisers of the chancellor, and they have urged him to send a German representative to the congress. But before doing so, the chancellor will submit to the governments of Germany and France certain propositions concerning the establishment of an international bimetallic standard.

It is rumored that a rise in the Bank of France rate of discount is inevitable this week. Since the last return, 6,500,000f. in gold have been withdrawn from the bank.

Gold imports at this port for the past week were $539,000, and there is no public knowledge of any more on the way. The receipts since August 2d have been $69,025,000, comparing with $73,415,000 the same period in 1879 and 1880.

During the past week, $104,999 in standard silver dollars was distributed from the mints, while for the corresponding week in 1880 the distribution amounted to $117,985.

WASHINGTON, Feb. 7.—The Treasury Department has directed the transfer of about $4,000,000 of gold from the New York Assay Office to the Philadelphia Mint for coinage into eagles and half-eagles.

Annual Tests of the Coinage.—PHILADELPHIA, Feb. 9.—The annual test of the coinage of the United States Mint in this city, the San Francisco Mint, and the Carson (Nev.) Mint was commenced to-day in this city.

The Senate Committee on Finance, on the 8th inst., directed to be favorably reported the bill for the purchase of property on Chestnut and Broad streets adjoining the U. S. Mint, with the view of extending that institution. The bill will be reported to the Senate to-morrow by Senator Wallace. This is identical with the bill introduced in the House by Mr. O'Neill, and which is now pending before the Committee on Coinage.

WASHINGTON, Feb. 10.—The Treasury Department to-day purchased 175,000 ounces of fine silver, for delivery at the San Francisco and New Orleans mints.

Numerous inquiries have been received at the Treasury Department relative to the value of a standard silver dollar on which the eagle has eight tail feathers. It appears that a report has been circulated that only a few of these pieces were coined, and that, consequently, they possess great numismatic interest and value. The facts are that, owing to a defect in the hub from which the first die for coining the standard silver dollars was made, the eagle had eight tail feathers. A new one was substituted, on which the engraver put seven feathers in the tail, but this was not done until about half a million pieces had been struck at the Philadelphia Mint, and probably as many more at the Western mints. The eight-feathered-tail dollars are therefore of no more value than those with only seven.

Exports of Gold and Silver from New York.

Week ending Feb. 5th	$327,400.00
Corresponding week last year	129,813.00
Since Jan. 1st this year	1,061,775.00
Corresponding period last year	895,293.00

Gold Interest Paid out by the Treasury.

Week ending Feb. 5th	$2,839,114.95
Corresponding week last year	3,385,703.76
Since Jan. 1st this year	7,870,072.71
Corresponding period last year	10,104,414.73

METALS.

NEW YORK, Friday Evening, Feb. 11.

The week under review has been one of the quietest we have had to report for a long time past. This is to be accounted for partly in consequence of the delays in transportation consequent on the ice blockade. Prices are well maintained, and there is a hopeful feeling in the future.

Copper.—Beyond a strictly jobbing business, there is nothing of note. Lake is firm at 19⅝@19½c., and Baltimore is held at 18⅝@18⅞c. The market may be said to be quiet but firm.

Our English advices by mail include January 28th. Jan. 26th. Market for Chili Bars undecided, with sales of g. o. bs. at £61¼ cash; £62½ and £62¾ forward deliveries, closing rather buyers than sellers thereat.

Jan. 27th. Better feeling, g. o. bs. selling at £61¼ cash, mostly "net money," the market closing

steady with buyers cash g. o. bs. at £62 full terms, sellers asking 2s. 6d.@5s. more.

Jan. 28th. Available bars are scarce, g. o. bs. selling at £61¾ sharp cash. Values rule as follows: G. o. bs., £62¼; favorite sorts, £62⅛@£62⅜; best, £62⅝@£63. Wallaroo Cake, £72; Burra, £68@£68⅛; English Tough, £65@£66; Select Ingot, £67⅛@£68½; India Sheets, £71@£72; Y. M. Sheets, 5⅛@6s. ₹ lb.

Tin.—There has been nothing doing in this metal since our last. We quote 20¼@20½c. for all brands. At the usual Batavia sale on Tuesday, 13,000 piculs were sold. The prices realized averaged 60·33 florins, a parity of 20½c. here. None of this metal was bought for American account. By cable during the week, the London quotations were £89@£89 10s. for spot stuff, and £90 10s.@£91 for futures. Penang, $28; Singapore, $28¼. Exchange, when last quoted, was 3s. 9d. Silver is higher, and probably exchange is also.

Our English advices by mail include January 28th.

Jan. 26th. Market active, with further advance in prices. Australian and Straits sold from 89¾@90s. sharp cash.

American advices for this metal are said to be stronger, and that India and China are absorbing a good portion of the supply in the Straits. Of the quantity now on the way to London from New York (about 380 tons), it is just possible that nothing will be landed, as it would pay better to return it by same vessel, rather than put into use here. In Banca, 1000 slabs, sale prompt, sold at 90½@90¾s.

Jan. 27th. There was quite an excitement, 91½@91¾s. being paid for a few parcels of cash stuff, 92½s. for delivery three months hence, rapidly receding to 91¼@91s. prompt payment.

On second 'Change, values were steadier, sales being made at 90⅞s. sharp cash, closing with buyers at this price, sellers asking 3s. 6d. per cwt. more.

Jan. 28th. Quotations irregular, cash stuff fetching 90¾s. immediate payment, market closing firm at 90½@91s. cash, with strong demand at lower rate.

Tin Plates.—We have no change to report in these since our last; the market is quiet and dull and without feature. We quote per box as follows: Charcoal tins, Melyn grade, ⅛ cross, $6⅛@$6¼; Allaway grade, $5⅞@$6. Charcoal roofing, Dean grade, $5⅝ for 14 × 20, and $10¾ for 20 × 28; Allaway grade, $5⅛@$5¼ for 14 × 20, and $10¼@$10½ for 20 × 28. Coke roofing, B. V. grade, $4¼@$4.95 for 14 × 20. Coke tins, A. B. grade, IC, $5⅝; B. V. grade, IC, $4.95@$5; ICW, $4¼ for 14 × 20.

Messrs. Robert Crooks & Co., of Liverpool, under date of January 27th, in their annual review, say of tin and terne plates:

If any thing, market is firmer, and there is decidedly more alertness in securing cheap parcels, the number of which is now small. In view not only of the extra cost, but also of the probability of a labor struggle, this increased attention on buyers' part is not surprising.

Messrs. Robert Crooks & Co., in their annual review, dated Jauuary 20th, say:

AVERAGE PRICE OF COKE, B. V. GRADE.

	1875.	1876.	1877.	1878.	1879.	1880.	Average for 10 years.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Jan.	26 6	21 6	18 9	17	15 11	20 1	24 2
Feb.	26 6	21	18 4	16 6	16 9	28 4	24 4
March	26 6	20	18	15 9	16 6	23 10	23 8
April	23 6	19 6	17 6	15 3	16 3	18 10	23 2
May	22	19	17 5	15	15 3	16 6	21 10
June	21 6	18 6	17 7	15	15 1	15 1	22 5
July	21	19 3	17 7	14 6	14 7	15 8	22 4
Aug	20 6	19 6	17 8	14	15 9	16 5	22 4
Sept.	20 6	19	17 4	13 6	16 3	15 7	22 1
Oct.	21	18 9	17 2	14 3	21 5	14 11	22 2
Nov	21	18 9	17 2	14 9	23 1	15 1	22
Dec.	21 9	19	17 1	15 3	23 4	15 1	22 6
For year.	22 8	19 6	17 8	15 1	19 5	18 8	23

	1871.	1872.	1873.	1874.	1875.
Total export of Tin Plates from Great Britain.	Tons. 119,606	Tons. 118,083	Tons. 120,638	Tons. 122,960	Tons. 138,363

	1876.	1877.	1878.	1879.	1880.
Total export of Tin Plates from Great Britain.	Tons. 132,564	Tons. 153,226	Tons. 155,240	Tons. 197,849	Tons. 217,699

DISPOSAL OF TIN PLATES EXPORTED IN 1880, AS COMPARED WITH 1879.

	United States.	Canada.	France.
Quantity in tons, 1880	Tons. 164,294	Tons. 10,399	Tons. 4,418
In comparison with 1879	5½ p. c. inc.	78 p. c. inc.	19 p. c. *dec.*

	Australia.	Other Countries.	Total.
Quantity in 1880	Tons. 4,474	Tons. 34,124	Tons. 217,699
In comparison with 1879	85 p. c. inc.	20 p. c. inc.	10 p. c. inc.

Pig-Lead.—Is firm without much doing. We quote common domestic firm at 4·95@5c. The *Age of Steel*, under date St. Louis, of February 5th, says:

The stock of lead in St. Louis at this time is very light, and there is no prospect of its immediate material increase. The cold weather has the effect of causing a suspension of operations at the mines, it being impossible to wash and dress ores; and the freezing water on the ropes and gearing used in relieving the pits of water, and bringing ores to the surface, deter operations to such an extent as to make suspension preferable to working under such disadvantages. Since our last, there has been an advance in price, our quotation this week being 4¾c. for soft.

The shipments over the St. Louis & San Francisco Railroad, for the week ending January 31st, were 85 tons.

Messrs. Robert Crooks & Co., in their annual review, dated January 20th, say:

	For the year. Per ton. £.	s.	d.
Average price of Good, Soft English Pig, 1880	16	5	10
" " " 1879	14	18	7
" " " 1878	16	17	4
" " " 1877	20	13	0
" " " 1876	21	15	9
" " " 1875	22	5	0
" " " 1874	21	6	8

Average price for the seven years, £19 3s. 2d.

	1876.	1877.	1878.	1879.	1880.
Imports of Lead into Gt. Britain	Tons. 80,713	Tons. 94,412	Tons. 100,233	Tons. 102,140	Tons. 95,202
Exports of British Lead from Gt. Britain	35,921	42,465	34,385	36,776	33,627

Spelter and Zinc.—Both quiet and without feature; we quote the former at 5¼c., the latter at 6⅞@7c. The *Age of Steel*, under date of St. Louis, February 5th, says:

Although spelter is quoted at 5 cents, purchasers could supply all their wants at 4¾ cents we have no doubt, the concession being in sympathy with a corresponding decline in the New York market.

Antimony.—We quote Cookson's 15c.; Hallett's and Johnson's, 14⅞c.

Quicksilver.—The San Francisco *Commercial Herald*, under date of January 28th, says:

The spot supply is very small, owing to the almost impassable condition of the roads leading in from the mines. The receipts thus far during the month, 3889 flasks, and the exports by sea, 4001 flasks. The overland shipments for January approximate 1200 flasks.

The exports for the week, by sea, were as follows:

Totals	927	$26,342
Previously since January 1st, 1881	3,077	86,934
Totals	4,004	$113,276
Totals same period 1880	1,283	31,711
Increase in 1881	2,721	$81,565

Receipts since January 1st, 1881, 4,099 flasks.

Overland shipments from January 1st to December 1st, 1880, 10,011 flasks.

And under date February 3d:

The spot stock is light. Market bare, owing to muddy roads and heavy rains. Demand fair; price, 37½c. The price in London has advanced to £6 15s. per bottle, and here the price has been advanced to 38c. The exports by sea since January 1st were 4004 flasks, valued at $113,276, and for the same time in 1880 were 2283 flasks, valued at $67,393. The overland exports for the year 1880 were 11,640 flasks. The receipts since January 1st were 4572 flasks.

IRON MARKET REVIEW.

NEW YORK, Friday Evening, Feb. 11.

The market bears an appearance of quietness, yet there is still a fair amount of business doing in the aggregate. Dealers and makers take an encouraging view of the situation, believing that there will be a large legitimate business. They are discouraging speculation as much as possible.

American Pig.—We note sales of 2500 tons of No. 1 Foundry, Thomas iron, at $25, and 2500 tons of Forge by same company at $20. An outside lot of 500 tons No. 1 Thomas sold at $25½. We hear of sales of other brands of No. 1 Foundry at $26,

Scotch Pig.—The arrivals have been small since our last, and have been absorbed. Prices abroad are a little lower, while there is no marked change here. We quote Eglinton at $22@$22½; Coltness, $24@$24½; Glengarnock, $23½; and Gartsherrie, $23½@$24.

Messrs. John E. Swan & Brothers, of Glasgow, under date of January 28th, report 122 furnaces in blast, as against 108 at the same time last year. The quantity of iron in Connal & Co.'s stores was 513,829 tons, an increase of 3737 tons for the week. The shipments show a decrease since Christmas of 13,045 tons, as compared with shipments to the same date in 1880. The imports of Middlesbrough pig-iron for the same period show a decrease of 16,451 tons. The following were the quotations of the leading brands of No. 1 pig-iron: Gartsherrie, 61s. 6d.; Coltness, 62s. 6d.; Langloan, 62s. 6d.; Summerlee, 62s. 6d.; Carnbroe, 58s.; Glengarnock, 58s. 6d.; Eglinton, 53s. 6d. Middlesbrough pig-iron was quoted as follows, f. o. b.: No. 1 Foundry, 45s.; No. 2, 43s.; No. 3, 41s.; No. 4, 40s. 6d.; No. 4 Forge, 40s.

Rails.—There has been quite a large business in steel rails. We note sales of 13,000 tons of American at $59 at works for fall delivery; 5000 tons English, spring shipment, Western delivery, at $65; 6000 tons American, delivery at Pittsburg, in July, August, and later, at $64; 2000 tons, $61 here; 4500 at $60 at mill; and a small lot at $63 at Western mill. There are considerable negotiations for iron rails, although we do not learn of actual business. American are worth $47½@$52 at mills East and West, while English from store here are held at $47½@$48.

Old Rails.—We note sales of 1000 tons of Ts. at $28¼, and 1000 tons of D. Hs. at $29. We quote the former at $28½, and the latter at $30.

Wrought Scrap.—There have been sales of fully 2000 tons at prices ranging from $29@$31. We quote at $30@$31.

We publish the following letters received from our regular correspondents:

Cincinnati. Feb. 8.

[Specially reported by TRABER & AUBERY.]

Our market shows more firmness in all grades of pig-iron. Some considerable transactions have taken place in mill kinds, at full prices, and the outlook generally is rather favorable to better prices.

We quote:

	Four mos.
No. 1 Hanging Rock Charcoal Pig-Iron	$26.50@$27.00
No. 2 " " "	25.00@ 26.00
No. 1 Tennessee " "	24.50@ 26.00
No. 1 Hanging Rock Coke "	24.50@ 25.00
No. 2 " " "	23.00@ 23.50
No. 1 Jackson Co. Stone Coal "	20.00@ 23.00
H. R. C. B. Car-Wheels, all Nos	40 00@ 42.00
Southern C. B. Car-Wheels, all Nos	38.00@ 40.00
Virginia " " "	39.00@ 40.00

Milwaukee. Feb. 2.

[Specially reported by R. P. ELMORE & Co.]

Our stock of Lake Superior iron, and other iron, is not equal to the demand. Prices are firm, with an advancing tendency. Sales were larger for the month just passed than for the corresponding month last year, and the supply is less.

We quote you as follows for pig-iron:

CHARCOAL IRONS.

No. 1 Lake Superior per gross ton	$31.00@
" 2 " " " "	30.00@
" 3 " " " "	32.00@
" 4, 5, and 6 " " "	35.00@
No. 1 Am. S., " " "	28.00@
" " Silvery, " "	26.00@
Sum. Imp. Scotch, " "	30.00@

F. o. b. cars here; four months.

Pittsburg. Feb. 8.

[Specially reported by A. H. CHILDS.]

Market about the same as last week; moderately active, with prices firm.

Foundry irons are in rather better demand than heretofore. Quotations are:

	4 mos.		4 mos.
No. 1 F'dry	$25.00@$26.00	M. & White	$20.50@$22.00
No. 2 "	23.50@ 25.00	Hot Blast Ch.	28.00@ 34 00
Gray Forge	22.00@ 24.00	Cold Blast W.	34.00@ 42.00

Richmond. Feb. 8.

[Specially reported by ASA SNYDER.]

Transportation facilities are wholly inadequate for the amount of business now doing. This market continues firm, and without change in quotations.

Scotch Pig-Iron	$24.00@$27.00
Amer. Scotch Pig-Iron	27.00@ 29.00
American " " No. 1	25.00@ 28.00
" " " No. 2	22.00@ 25.00
" " " No. 3	21.00@ 23.00
" " Mottled and W	19.00@ 21.00
Best Charcoal Wheel Iron	38.00@ 41.00
Va. Cold Blast Charcoal Pig-Iron, neutral	
" Warm " "	
Old Rails	26.00@ 28.00
Old Wheels	28.00@ 29.00
Wrought Scrap No. 1	22.00@ 25.00
Cast Machinery Scrap	21.00@ 22.00
Richmond Refined Bar Iron	2 6-10@
Horse-shoes (Tredegar)	4.00@
Mule-shoes "	5.00@

St. Louis. Feb. 5.

[Specially reported by HOFFER, PLUMB & Co.]

A good demand has been experienced since our last report, particularly for foundry irons, and prices are firm at the following quotations:

HOT BLAST CHARCOAL.

Missouri	$27.00@28.00
Southern	26.00@28.00
Hanging Rock	28.00@29.00

COKE AND COAL.

Missouri	None offering
Southern	$26.00@26.00
Ohio	25.00@26.00

MILL IRONS.

Cold short	$22.50@23.50
Red short	26.00@26.50

CAR-WHEEL AND MALLEABLE IRONS.

Missouri	$30.00@35.00
Southern	35.00@38.00
Ohio	35.00@45 00

IRON ORE.

For fix	Nominal
Furnace	6.50@ 7.50
Brown hematite	No market.

John H. Austin & Co.'s Special Market Report.

LONDON, E. C., Jan. 27.

STEEL RAILS.—£6 10s.@£7 per ton; market very strong, many makers having closed their books for the present, against further orders.

IRON RAILS.—£5 12s. 6d.@£6 per ton; strong market, with a general indisposition to book further orders at present.

BAR IRON.—£5 2s. 6d.@£5 5s. per ton; very quiet.

OLD RAILS.—In demand for forward shipment to U. S. ports; sellers shy; nominally 80s. for D. Hs., and 75s. per ton for flanges f. o. b. shipping ports.

HEAVY WROUGHT SCRAP-IRON.—Business done at 75s. per ton f. o. b. London, etc. Still buyers, but sellers holding for 80s. per ton.

OLD RAILWAY LEAF SPRING STEEL.—Nominally £5 15s.@£6 per ton c. i. f. U. S. ports, very firm.

OLD CAST-IRON RAILWAY CHAIRS.—A fair home inquiry, and business doing equal to 40s. per ton f. o. b. London.

STEEL BLOOMS, 7″ × 7″ AND UPWARD.—Nominally £6 per ton f. o. b., but nothing offering.

BESSEMER PIG-IRON, NOS. 1, 2, AND 3.—In good demand, 65s.@70s. per ton, according to brands.

SCOTCH PIG-IRON.—Fluctuating between 52s. 6d. and 53s.

MIDDLESBROUGH PIG-IRON, No. 3.—Dull at 40s. for prompt, and 41s. 6d.@42s. April to June.

STEEL RAIL ENDS.—75s. per ton f. o. b. paid for some large parcels for American account.

COAL TRADE REVIEW.

Anthracite.

NEW YORK, Friday Evening, Feb. 11.

The present weather will materially change the condition of affairs in the coal trade. It reduces the consumption of domestic sizes of coal and increases the ability to move all kinds. The railroad tracks are now practically clear again, but the motive power has been very much strained and requires considerable repairs, so that railroad companies will not, for a short time at least, be able to move nearly as much coal as might be expected. The harbor still contains enough floating ice to give considerable trouble to boats, but is in a much more satisfactory condition than it has been for a long time past. The demand for coal is quite active and is likely to be for some time to come. It is stated on good authority that the companies are all inclined to harmony, and that they will not permit the market to be overstocked and a serious decline in prices to take place. This, however, we have heard before, and although no serious overstocking or decline in prices may take place, yet we are inclined to think that the business will be somewhat overdone before the summer months set in. Coal is now being shipped North by rail in considerable quantities, while the West has not lessened its demand. There are a great many points in the East requiring coal that can not get it until the opening of navigation, when there will unquestionably be, for a time at least, a very good demand, from manufacturers especially. There will probably be a large amount of stocking up done this year, but there will still be a good bit of hand-to-mouth purchasing practiced, as has been the case for several years past.

Bituminous.

This coal is in very active demand but light supply. The supply of cars and motive power on the Pennsylvania Railroad is increasing the shipments of Clearfield coal. The shipments of Cumberland coal are mostly confined to Baltimore, the only open port, which, however, has labored under the disadvantage of high freights. Prices of coal in this city range between $5 and $5.25 along side. It is rumored that several large contracts have already been closed, and inquiries are still made by a number of other quite large consumers. The prospects for the bituminous trade for 1881 are better than they have been for years, and the product will probably reach a very high figure.

We publish the following letters received from our regular correspondents:

Louisville. Feb. 2.

[Specially reported by BYRNE & SPEED.]

The coal business has been brisk here, up to the past week; but on account of high prices and the recent run from Pittsburg, there is very little doing.

Prices are as follows:

WHOLESALE.

Pittsburg, per bush....12c. | Kentucky, per bush.....10½c.

RETAIL.

Pittsburg, per bush	18c.	Kentucky, per bush	14c.
Cannel, " "	20c.	Coke, " "	12c.

Anthracite, per ton, $9.

Milwaukee. Feb. 2.

[Specially reported by R. P. ELMORE & Co.]

The unusually severe weather has had a tendency to create an unusual demand for all kinds of coal.

The fearful snow blockades, scarcity of cars, and other unfortunate circumstances have rendered it impossible to get coal forward with any degree of regularity, and consequently the stocks on hand are small.

As soon as railroad facilities improve, the demand (though great) will be easily supplied. We quote you as follows:

Blossburg	$5.00	Briar Hill	$7.00
Cumberland	5.75	Straitsville	6.00
Lehigh lump	8.50	Illinois	4.50
Prepared (all sizes)	8.50		

New Orleans. Feb. 2.

[Specially reported by C. A. MILTENBERGER & Co.]

The coal market during the month of January has been an exceedingly active one, with the greatest consumption of Pittsburg coal ever known here. Good prices have been obtained, and altogether the business has been satisfactory, excepting to those dealers having contracts at low figures. There is but 3 weeks' supply on hand, but 2 or 3 tows of coal are now *en route* to this market, which will ease the market some on arrival.

Coal on hand in this city February 1st: Pittsburg coal, 25 boats and 4 barges. Consumption during January: Pittsburg coal, 53 boats and 1 barge. Arrivals during January: Pittsburg coal; 8 boats from Pittsburg, 6 boats and 4 barges from Baton Rouge, and 6 boats from Bayou Sara.

PITTSBURG COAL.

At wholesale	47½@50c.	per bbl.
To steamboats	60c.	"
" factories, etc	65c.	"
" families	75c.	"
In hogsheads	$7.50	per hhd.

ALABAMA COAL.

To families.....(nominal)..... 65@75c. per bbl.

ANTHRACITE COAL.

At wholesale	$7.00@$8.00	per ton.
" retail	9.50@10.00	"

VIRGINIA CANNEL COAL.

To families..... stock exhausted.

San Francisco. Feb. 3.

The imports of coal at San Francisco for the past week include the following: Per ship Glengary, 1182 tons Cardiff; Malay, 1100 tons Wellington; Blue Jacket, 1790 tons ditto; Sumatra, 1659 tons ditto; Oregon, 1920 tons ditto. From Seattle, 1250 tons per Aureola and 1850 tons per Yosemite. From Coos Bay, 575 tons per Arcata, 492 tons per George C. Perkins, 300 tons per American Girl, and 250 tons per Clara Light. From Newcastle, N. S. W., 1765 tons per Angerona. The Edderside, from Sydney, brought 1980 tons. The bulk of the above was sold prior to arrival, and all the business done is simply on the hand-to-mouth principle for the supply of household wants. No spot quotations that we could give would apply otherwise than to a retail traffic. The coal ring is, to say the least, very unpopular, and entirely devoid of reason—it is simply a grab game. The ship Majestic, from Seattle, brought 1717 tons. From Coos Bay, the Melancthon had 415 tons, and the Norway 320 tons. The steamer Empire has the second cargo of Carbon Hill from Washington Territory, say 735 tons, and sells to the trade at $10 per ton, and which is also the price of Seattle and Coos Bay to dealers; other house coals are held at $12@$13 in a jobbing way. The ship Templar has 1500 tons Seattle; Tam O'Shanter, 800 tons same.

The second cargo of Oregon (Carbondale) coal has been received. We have no knowledge as to its quality, but believe it is selling at the same price as Coos Bay and Seattle, and strong efforts are being made to introduce it to families. The spot market has undergone no change in values as yet. Prices here continue to rule exorbitantly high, and with no good reason. Mr. George Mitchler, U. S. Consular Agent at Newcastle, N. S. W., writes us under date of December 29th, as follows: I have to advise you that the price of best screened coal from the collieries in this district will be eight shillings per ton from January 1st, 1881, and is likely to remain at the above price for a long time. By the arrival of the steamer City of Sydney on Saturday last, we have Australian mail advices to the close of the year. Advices from San Francisco of an advance had no effect at Sydney, as it was utterly impossible to get ships, even at a nominal advance of 3s., the closing quotations being 15s. from Sydney and 18s. from Newcastle. The price of coal at Newcastle was reduced, on January 1st, from 10s. to 8s. per ton. Ships at all Australian ports are scarce. The arrivals of coal at this port during the last week include the following: Alex. Gibson, from Liverpool, 2202 tons; Br. bark River Nith, from Ardrossan, 1470 tons Scotch; Young America, from Liverpool, 1490 tons; ship George F. Manson, from New York, 402 tons; Sintram, from New York, 450 tons anthracite, and the Vigilant 600 tons same.—*Commercial Herald.*

FREIGHTS.

Coastwise Freights.

Per ton of 2240 lbs.

Representing the latest actual charters to Feb. 11th, 1881.

PORTS.	From Philadelphia.	From Baltimore.	From Elizabethport, Port Johnson, South Amboy, Hoboken, and Weehawken.
Alexandria			
Annapolis			
Apponang			
Baltimore			
Bangor			
Bath, Me			
Beverly			
Boston, Mass	2.00		2.00@2.25
Braintree			
Bridgeport, Conn.			
Brooklyn			
Cambridge, Mass.			
Cambridgeport			
Charleston	2.00		
Charlestown			
Chelsea			
City Point			
Com. Pt., Mass.			
E. Boston			
East Cambridge			
E. Gr'nwich, R. I.			
Fall River			
Fredericksb'g, Va			
Galveston			
Georgetown, D.C.			
Gloucester			
Hartford			
Hackensack			
Lambertville			
Lynn			
Marblehead			
Medford			
Millville			
Milton			
N. Brunsw'k, N.J.			
New Bedford			
Newburyport			
New Haven			1.00
New London			
New Orleans			
Newport			
New York			
Norfolk, Va			
Norwich			
Norwalk, Conn			
Petersburg			
Philadelphia			
Portland			
Portsmouth, Va.			
Portsmouth, N.H.	1.35		
Providence			1.50
Quincy Point			
Richmond, Va.			
Rockland			
Rockport			
Roxbury			
Saco			
Sag Harbor			
Salem, Mass.			
Saugus			
Savannah	1.95		
Somerset			
Staten Island			
Trenton			
Troy			
Wareham			
Washington			
Weymouth			
Williamsbg, N.Y.			
Wilmington, Del.			
Wilmington, N.C.			

* And discharging. † And discharging and towing. ‡ 3c. per bridge extra. § Alongside. ‖ And towing up and down. ¶ And towing. ** Below bridge.

STATISTICS OF COAL PRODUCTION.

Comparative statement of the production of anthracite coal for the week ending Feb. 5th, and years from January 1st:

TONS OF 2240 LBS.	1881.		1880.	
	Week.	Year.	Week.	Year.
Wyoming Region.				
D. & H. Canal Co.	68,452	267,024	58,300	362,111
D. L. & W. RR. Co.	63,935	311,151	59,964	338,868
Penn. Coal Co.	13,392	81,337	8,782	52,062
L. V. RR. Co.	15,955	91,530	20,589	112,817
P. & N. Y. RR. Co.	706	3,381	32	1,247
C. RR. of N. J.	*	100,828	5,958	148,862
	162,440	855,251	153,625	1,015,967
Lehigh Region.				
L. V. RR. Co.	76,004	330,058	44,263	263,642
C. RR. of N. J.	*	83,474	19,413	169,820
S. H. & W. B. RR.				1,646
	76,004	413,532	63,676	435,108
Schuylkill Region.				
P. & R. RR. Co.	110,543	470,849	75,126	480,172
Shamokin & Lykens Val.	7,954	74,747	8,953	46,939
	118,497	545,596	84,079	527,111
Sullivan Region.				
St Line & Sul. RR. Co.	1,028	5,542	332	3,355
Total	357,969	1,819,921	301,712	1,981,541
Increase				
Decrease		161,620		

* These reports were not received this week.

The above table does not include the amount of coal con-

sumed and sold at the mines, which is about six per cent of the whole production.

Total same time in 1876	1,329,752 tons.
" " " " 1877	1,468,020 "
" " " " 1878	1,399,548 "
" " " " 1879	1,820,099 "
" " " " 1880	1,981,541 "

Belvidere Delaware Railroad Report for the week ending Feb. 5th:

	Week.	Year. 1881.	Year. 1880.
Coal for shipment at Coal Port (Trenton)			
Coal for shipment at South Amboy	6,674	48,708	45,039
Coal for distribution	12,634	68,732	43,353
Coal for company's use	2,402	11,636	11,280

The Production of Bituminous Coal for the week ending Feb. 5th was as follows:

Tons of 2000 lbs., unless otherwise designated.

	Week. Tons.	Year. Tons.
Cumberland Region, Md.		
Tons of 2240 lbs	24,957	124,245
Barclay Region, Pa.		
Barclay RR., tons of 2240 lbs	9,480	44,687
Broad Top Region, Pa.		
Huntingdon & Broad Top RR	3,710	21,652
*East Broad Top	2,054	68,797
Clearfield Region, Pa.		
*Snow Shoe	1,717	57,844
*Tyrone and Clearfield	42,812	1,721,261
Alleghany Region, Pa.		
*Pennsylvania RR.	10,099	306,516
Pittsburg Region Pa		
West Penn RR	10,255	291,749
Southwest Penn. RR.	951	33,081
Penn & Westmoreland gas-coal, Pa. RR.	22,335	937,197
*Pennsylvania RR.	15,891	562,558

The Production of Coke for the eight days and year ending Dec. 31st, 1880:

*For the eight days and year ending Dec. 31st, 1080.

†This report was not received this week.

Tons of 2000 lbs.	Week.	Year.
Penn. RR. (Alleghany Region)	1,262	60,475
West Penn. RR.	3,179	78,606
Southwest Penn. RR.	42,491	1,149,785
Penn. & Westmoreland Region, Pa. RR.	4,000	138,820
Pittsburg, Penn. RR.	10,207	468,856
Total	61,139	1,896,542

COAL NOTES.

The Trouble about Shipping Coal in Winter.—The subject of car supply and coal shipments is the all-absorbing topic among the operators and miners of this coal section. Every shipper says his orders demand double the number of cars he is receiving daily. Now this is all true, and each one is puzzling his brain to know why the railroad company don't furnish more cars to meet this want. Without pretense of speaking by authority, we will simply refer to last week's report of coal shipments from this division of the railroad, from which we learn that 32,279 tons of coal passed over the Tyrone scales, over which, during the corresponding period of last year, 51,364 tons were shipped. This decrease of nearly 19,000 tons was not owing to a lack of orders, but an utter impossibility to forward over the mountains. It requires an average of three hundred and fifty cars daily, of an average load of fifteen tons to each car, to do the work that was done last week. This number of cars, with their total freight of 5250 tons, had to be taken up the mountain grade of nearly 150 feet to the mile to the summit, and from thence down a similar grade to its base, with three to four engines to the trip and from twelve to fifteen trips per day. This work can be done in mild and moderate winters with some degree of certainty, but how uncertain is railroading on such grades and curves with daily snow-falls and frequent frigid waves of zero and lower temperature. Should any of our readers be somewhat skeptical upon the question, let them just get a little practical information by stepping into any shipper's yard, and see the laborious operation of moving a single car with but two inches of snow on the rail, compared with moving the same on the clear rail free from snow. Ten minutes' glance will be sufficient. As it is, and to do the work that is now done, necessitates the working of the larger portion of the employés of the road from three to six hours extra on each day's duty. This severely imposed task could be easily borne in pleasant weather, but how terrible to brave the driving storm and piercing winds for twelve to eighteen hours consecutively. This must all be done to accomplish this work. These are very nearly the facts of the case as we gather them from observation, and we know it is also a fact that no party would rejoice more deeply than the superintendent of this division, could he just double the carrying capacity of his road. A few months ago, we heard him express the hope that the capacity of the road could be worked up to eight hundred car-loads daily; but then, he, like others, did not dream of the severity of the coming winter. The utmost is done that can be done, and we have no doubt but the coming spring will witness movements on the part of the railroad company that will insure the transportation of all the coal that can be sold from this region, or at least to move 100,000 tons weekly.—*Philipsburg Journal.*

Crushed Coke for Domestic Use.—The Connellsville Crushed Coke Company, recently organized, has erected a large building, the dimensions of which are 75×36 feet, and placed therein an ingenious and complicated piece of machinery for the purpose of preparing crushed coke for domestic use, to compete with the anthracite coal trade. As yet the invention has not proved a success, the company not being able to turn out but two cars of the new fuel per day, the full capacity of which should be twelve cars. The company intends experimenting with the machine during the coming summer, with a view of getting it in proper running order. If successful, it claims that coke for household purposes can be manufactured at a small cost, and that it will come into general use, to the exclusion of coal. The proprietors decline explaining its *modus operandi* until they have it in proper working order.—*Keystone Courier.*

The Coal Trade of Nova Scotia for 1880.—The following we condense from the Montreal *Gazette* of February 8th:

The import of coal into Ontario and Quebec during the fiscal year 1880, was somewhat larger than in 1878. The imports of coal into the provinces of Ontario and Quebec, in the two years under comparison, were as follows:

1878.	1880.
850,329 tons.	1,038,208 tons.

There was thus an increased importation in the last fiscal year of 187,879 tons, or about 22 per cent. This considerable increase in the consumption of coal must arise from the growth of population and of manufacturing industries: it has been produced, we believe, almost wholly by the latter cause. The establishment of sugar refineries, of new cotton and woolen mills, and various other branches of manufactures not previously existing in the Dominion, together with the enlargement of factories before in operation, readily accounts for the larger demand for coal which the trade returns show to have prevailed during the past fiscal year. The returns from the various coal mines in the province of Nova Scotia for the year 1880 have nearly all been received, and the results shown are of the most satisfactory character. The amount of sales during the year was as follows:

	Tons.
1st quarter	76,644
2d "	224,138
3d "	403,909
4th "	249,968
Total	954,659

In the preceding year, the sales aggregated 688,624 tons, so that in 1880 there was an increased sale of 266,035 tons, or 38½ per cent, against an increased importation of 22 per cent. The largest sales ever before recorded in the history of the Nova Scotia coal-trade was in 1873, when, under the influence of the previous duty on American coal, they reached 881,106 tons, or 73,553 tons less than in the year which has just closed. The total sales for the year would have exceeded 1,000,000 tons had it not been for the disaster to the Halifax mine at Stellarton, and the consequent derangement of other mines for some weeks. As it was, the total output for the year reached 1,033,710 tons, against an output of 788,271 tons in 1879.

The above figures of produce and sales given by the *Gazette* are somewhat different from those sent us from the office of the Inspector of Mines, Halifax, which are as follows: Total produce Nova Scotia coal for 1880, 1,058,700 tons; total sales, 935,600 tons of 2240 pounds.

The Coal Measures of Ohio.—The coal measures of Ohio spread over an area of 10,000 square miles, and inclose 20 beds of coal of workable thickness, aggregating 75 feet. Every variety of bituminous coal is met in the series, from the ordinary house coal to the finest grades of steam, gas, and furnace fuels. The different coal regions of the State are the Mahoning Valley, the Tuscarawas Valley, the Hocking Valley, the Jackson Valley, the Salineville District, the Steubenville District, the Bellaire District, the Pomeroy District, the Hanging Rock District, the Coshocton District, the Cambridge District, the Del Roy District, and the Wheeling Creek Valley. Seven million tons were the product of the mines last year, according to the report of the Inspector of Mines. Eighteen thousand persons are engaged in and about the mines in preparing the coal for market. There are three kinds of mines in use for reaching the coal, namely, the shaft, the slope, and the drift. The slope is a slanting shaft, and is only used where the seam of coal lies near the surface; where drifting is practiced, the beds are level free or above the water-level. The coals mainly wrought at present are, the lower seam of the series, Bear Hill, Massillon, and Jackson; the great vein, Shawnee, Straitsville, Nelsonville, and Sunday Creek; and the Pittsburg, Bellaire, Pomeroy, etc. All the mines in the State are drawn from these three coals. There are 600 mines in operation, but only 315 are shipping mines, the remaining 285 being termed "country banks," that is, the coal is mined and sold for local use.

The beds of iron ore in the coal measures of the State, though much thinner than the coal seams, are nevertheless as numerous and as valuable as the coals. There are in Ohio 106 blast-furnaces spread over 20 counties, all of which use some native ore, and nearly one third of them depend on the native ores altogether for the manufacture of iron. The ores are known by various names like the coal, such as the Hanging Rock ore, the Blackband ore, the Kidney ore, the Red ore, etc. The most valuable bed is the Gray ore, found in the Lower Coal Measures between coals No. 4 and No. 5 of the geological nomenclature. The Blackband is next in value. The Gray ore is the Hanging Rock ore; the Blackband is the Mineral Ridge and Tuscarawas ores.

The limestones of the Coal Measures, though not so valuable as the coal and iron ore beds, are still valuable in the uses to which they are put as fluxes in the blast-furnaces, and are more valuable in proportion to their proximity to the coal and ore beds. The fire-clays which usually underlie the coal and ore beds are being used in the manufacture of fire-brick in different localities in the State. Some of these fire-clays are of unusually fine quality.—*Cleveland Trade Review.*

The Current Liabilities of the Reading Railroad Co.—The acting secretary of the Reading Railroad Company has presented to the masters the following statement of the current liabilities of that company, in response to inquiries made of him, as follows:

First. What liabilities are due in list beginning with income mortgage?

Commencing with income bonds, the only items that are due are the following:

Floating debt	$10,490,215.79	
Less, not matured this date, January 21st, 1881	3,372,247.48	$7,117,968.31
Unpaid overdue coupons, interest and dividends		730,752.06
Current business obligations due for accruing rentals, due to connecting railroads, due for wages and materials, last month's business, and for taxes		3,450,971.62
A small portion of item	$1,150,955.21	

Second. What in position to become due at the option of the holder?

Of the unmatured floating debt, none that we know of.

Third. If any not due, what time to run?

Sundry notes payable, due between January 21st and September 12th, 1881		$3,272,247.48
Income mortgage in 1869		2,454,0[illegible]6.00
Scrip (convertible into income mortgage bonds) in 1882		3,301,729.10
Convertible bonds in 1890	$28,000.00	
" " 1893	10,499,000.00	10,527,000.00
Open debenture bonds (C. & L. Co.) in 1892	$1,731,000.00	
Open debenture bonds (RR. Co.) in 1893	1,124,900.00	
Open debenture bonds (RR. Co.) in 1898	209,600.00	2,065,500.00

Debts of leased lines, guaranteed to be paid at maturity, and on payment of which annual rentals are reduced equal to yearly interest on amount paid:

Schuylkill Navigation Company, in 1895	$1,200,000.00	
Schuylkill Navigation Company, in 1913	756,650.00	
Schuylkill Navigation Company, in 1915	721,600.00	
East Pennsylvania Railroad Company, in 1888	495,900.00	$3,074,150.00
Receivers' certificates, no due date		2,553,315.98

INDIAN QUEEN

MINING AND MILLING COMPANY.

Capital Stock - - - $250,000.

Dividends paid to date, $235,000.

President—Hon. G. WASHINGTON WARREN.
Treasurer—MICAH DYER, JR., Esq.
Secretary—CHARLES C. LANE.
Superintendent—WM. ADAMS, JR.
Bankers—PACIFIC NATIONAL BANK.

The Indian Queen mine has been, is now, and will for the future pay a dividend of 2 per cent a month.

For prospectus or further information inquire at the office of the company, No. 7 EXCHANGE PLACE, Boston, Mass.

TUOLUMNE GOLD MINING CO.,

Mines Located Tuolumne County, Cal.

Capital, $1,000,000; 200,000 shares, par, $5.

GEORGE R. CONGER, President,
21 Nassau street, New York.

CHARLES WENDALL, Secretary,
79 Milk street, Boston.

THE LATEST AND BEST.

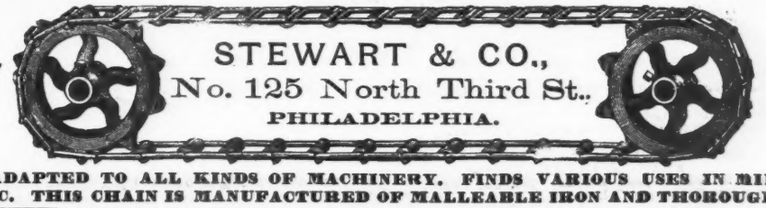
The Crocker Reversible, Self-Packing and Self-Cleansing Filter and Purifier.

PATENTED JUNE 29, 1880.

Readily cleansed without removing from the faucet. Warranted never to become inoperative. Always as easily reversed as when first put into use. The Most Perfect and Effective, Filter and Purifier yet Produced. For use on FAUCETS on DWELLING HOUSE, SCHOOL HOUSE HOTEL, and other main pipes, and on STATIONARY BOILERS and LOCOMOTIVES; also in PAPER MILLS, BREWERIES, BLEACHERIES, STARCH FACTORIES, and other manufacturing establishments requiring PURE water. Made in sizes up to 30 inches diameter, and larger if required. All sizes cleansed alike, WITHOUT REMOVING FROM CONNECTIONS.

CROCKER FILTER CO., 174 High St., Boston.

EWARTS DETACHABLE CHAIN.



ADAPTED TO ALL KINDS OF MACHINERY. FINDS VARIOUS USES IN MINES, ETC. THIS CHAIN IS MANUFACTURED OF MALLEABLE IRON AND THOROUGHLY TESTED.

SPECIAL NOTICES.

NAVAL CONSTRUCTOR'S OFFICE,
NAVY YARD, NEW YORK, Dec. 9, 1880.

SIR: I would respectfully report that the two Boilers located in the Smithery have been covered with H. W. Johns Manufacturing Co.'s Asbestos Non-conducting Covering. The work has been done thoroughly and satisfactorily.

Since completion of the work there has been a saving in the consumption of coal of about THIRTY PER CENT.

Very respectfully, your obedient servant,
GEORGE R. BOUSH, Naval Constructor.

To Commodore GEORGE H. COOPER, U. S. N.,
Commandant Navy Yard, New York.

ENGINEER.—A LICENSED ENGINEER would like a situation in mining district, Colorado or New Mexico preferred. Can give good references. Address ALFRED T. BROPHY, 171 Bleecker street, N. Y. City, care of Gassin Brothers.

SECOND-HAND MICROSCOPE FOR SALE cheap. The microscope is a fine French instrument, with a magnifying power of 900 diameters. A rare chance for a school or amateur to procure an instrument at a small part of original cost. Will be sold for $50, cash. Address, MICROSCOPE, P.O. Box 4404, New York.

DIVIDENDS.

NEW YORK, FEBRUARY 2, 1881.—THE STANDARD CONSOLIDATED MINING COMPANY to-day declared its regular monthly dividend of

SEVENTY-FIVE CENTS PER SHARE,

payable February 12th, 1881, at the Agency of the Bank of Nevada, No. 62 Wall street, New York. Transfer-books close on February 5th, and open on the 14th instant.

M. R. COOK, Vice-President.

OFFICE OF THE TOMBSTONE MILL AND MINING COMPANY, 432 Walnut Street.
ELEVENTH DIVIDEND.

PHILADELPHIA, Jan. 28, 1881.

The Executive Committee of the Board of Directors of this Company have this day declared the regular monthly dividend of $50,000; being ten cents on each share of the capital stock of the company; payable on and after February 15th, at this office. Transfer-books closed from 10th to 15th inclusive.

GEORGE BURNHAM, President.
W. J. CHEYNEY, Secretary.

NEW YORK, Feb. 3, 1881.

HIBERNIA CONSOLIDATED MINING COMPANY, New York, February 7th, 1881.—The Board of Trustees of this Company have this day declared a

DIVIDEND (NO. 3) OF $30,000,

or 10 cents per share, payable at this office, rooms 51 to 57, No. 115 Broadway, on February 28th.

Books close February 23d; reopen March 1st.

DRAKE DEKAY, Treasurer.

OFFICE OF THE ONTARIO SILVER MINING COMPANY, No. 18 Wall street,

NEW YORK, Feb. 5, 1881.

DIVIDEND NO. 64.

The regular monthly dividend of FIFTY CENTS PER SHARE has been declared for January, payable at the office of the transfer agents, Wells, Fargo & Co., No. 65 Broadway, on the 15th inst.

Transfer-books closed on the 10th inst.

H. B. PARSONS, Asst. Secretary.

OFFICE OF THE DEADWOOD-TERRA MINING CO., 18 Wall street,

NEW YORK, Feb. 9, 1881.

DIVIDEND NO. 3.

The monthly dividend of TWENTY-FIVE CENTS PER SHARE has been declared for January, payable at the office of the transfer agents, Wells, Fargo & Co., 65 Broadway, on the 21st inst.

Transfer-books close on the 15th inst.

H. B. PARSONS, Secretary.

ASSESSMENT.

GLYNN-DALE CONSOLIDATED GOLD MINING COMPANY.

Location of principal place of business, San Francisco, California.

Location of works, Bodie District, Mono County, California.

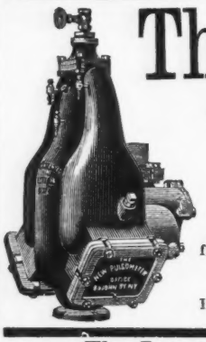
NOTICE IS HEREBY GIVEN that at a meeting of the Board of Directors, held on the 14th day of January, 1881, an assessment (No. 3) of twenty-five (25) cents per share was levied on the capital stock of the corporation now outstanding, payable immediately, in United States gold coin, to the secretary, at the office of the company, Room 9, No. 328 Montgomery street, San Francisco, California, or at Mining Trust Company, No. 115 Broadway, New York City.

Any stock upon which this assessment shall remain unpaid on the eighteenth (18th) day of February, 1881, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on Saturday, the nineteenth (19th) day of March, 1881, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

By order of the Board of Directors.

FRANK B. LATHAM, Secretary.

Office, Room 9, Safe Deposit Building, No. 328 Montgomery street, San Francisco, Cal.



The New Pulsometer

Will save over Fifty per cent in Fuel with greater duty than any other Steam Pump in the market; also, more Simple, Durable, and Compact. Specially adapted to Mining, Railroads, Steamboats, Paper Mills, Chemical and Gas Works, Tanneries, Breweries, Sugar Refineries, and other Manufactures. For Draining Quarries, Cellars, Plantations, and various other purposes. For Contractors use it has NO EQUAL.

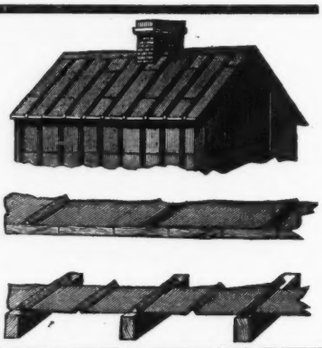
Send for book giving full description, reduced prices, and many letters of commendation from leading manufacturers and others throughout the country who are using them.

PULSOMETER STEAM PUMP CO.,
P. O. Box No. 1533. **Office, No. 83 John St., New York City.**

The Largest Manufacturers
—OF—

Sheet-Iron Roofing

IN THE UNITED STATES.



Can Give the Best of References in every State and Territory

PORTER IRON ROOFING CO.,

101, 103 and 105 West Front Street, Cincinnati.

All Kinds of Corrugated Iron Furnished.

☞ Send for illustrated circulars, and mention this paper.

PROSPECTING.

CALIFORNIA STAMP MILL.

"THE MOUNTAINEER."

THIS MILL,

Though so Light and Portable, is capable of crushing ordinary hard

QUARTZ ROCK,

on sixty six-inch drops per minute through a screen,

No. 6 Slot,

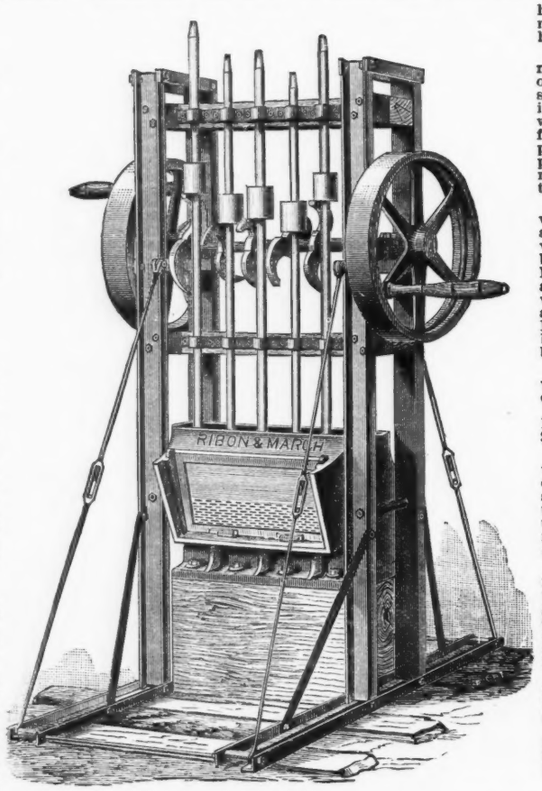
to amount to two hundred and fifty to three hundred lbs. per hour.

PRICE, F. O. B., $350.

Weights
OF PARTS.

Iron Frame (in sections)	500 lbs.
Mortar (feed 1¾x24 in.)	500 lbs.
Cam Shaft	40 lbs.
Fly Wheel Pulleys (30x3½ in. each)	150 lbs.
Cams	20 lbs.
Stems	34 lbs.
Tappets	16 lbs.
Heads	32 lbs.
Shoes (4¼ in. face)	20 lbs.
Dies (4½ in. face)	25 lbs.

The above cut represents our Portable Prospecting Five-Stamp Mill. It weighs but two thousand pounds complete, ready for operation. It is put together with bolts and nuts instead of rivets, and can be readily taken apart, and transported anywhere on the backs of animals, as the heaviest piece does not weigh over five hundred pounds.



The Mortars are made of two styles—one for ordinary stamping or crushing, and the other with flaring back and front ledges to support inside copper plates for amalgamating in the battery.

It is mounted in a wrought-iron frame, and has two balance wheels arranged to be used with hand, horse or other available power. All wearing parts, such as Cams, Tappets, Heads, Shoes and Dies are made of best Cast Steel.

In ordering, state which mortar is required.

3-16 inch Copper Plate, fitted, price, $5 per set of two.

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